

The Mining Journal.

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2357.—VOL. L.

LONDON, SATURDAY, OCTOBER 23, 1880.

WITH SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST £1 4s.

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Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.
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25 East Crebor, £1 8s. 9d.
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20 Flagstaff, £1 10s.
20 Frontino, £1 18s. 9d.
20 Glenrock, £1 7s. 6d.
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15 Richmond, £15 13s. 9d.
25 Roman Grav., £9 15s.
40 S. Indian Gold, £1 15s.
20 Santa Barbara.
10 So. Condurrow, £11 8s. 9d.
25 South Darren, £2 12 6.
25 So. E. Wynad, £1 7s. 6d.
50 S. Penstruthal, 10s.
35 Trevecon Con., 16s. 3d.
15 Tankerville, £2 17s. 6d.
25 West Phoenix, £2.
50 Wheel Crebor, £4 2s. 6d.

RAILWAYS—SPECIAL BUSINESS.
FOREIGN BONDS—SPECIAL BUSINESS.
AMERICAN STOCKS AND SHARES—SPECIAL BUSINESS.
Fortnightly accounts opened on receipt of the usual cover in these and all Stock Exchange Securities.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

M. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
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50 Gwalloway.
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30 Leadhills, £2 13s. 9d.
15 Mellanear.
40 Marke Valley, 38s. 6d.
50 New Peavor.
100 Nouveau Monde, £1 1/2.
50 No. Herodsfoot, 11s. 9d.
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200 New Quebrada, £4 1/2.
25 North Bay.
50 Panulicillo, £4 1/2.
100 Parys Copper, 18s. 6d.
75 Pen-yr-Orsedd.
50 Port Phillip, 11s.
50 Prince of Wales.
40 Port Nicol, £2 1/2.
20 Ruby, £5.
15 Richmond, £15 11s. 3d.
10 Roman Gravels, £2 1/2.
5 Rio Tinto, £17.
60 San Pedro, 13s.
100 South Indian, 34s. 6d.
50 S. East Wynad, 26s.
5 Tincroft.
50 West Caradon, £1 1/2.
5 Wheel Peavor.
20 Wh. Crebor, £4 1/2.
10 Wh. Grenville.
100 Wh. Jewell, 14s.
10 Wheel Kitty, £5.

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20 Don Pedro.
20 Devon & Tiverton Bry.
20 Exchequer.
20 East Crebor.
20 East Caradon.
60 East Chiverton.
50 Emma.
20 Frongoch.
75 Flagstaff.
20 Frotscue.
50 Glenroy.
40 Gwalloway.
25 Glenrock.
25 Herodsfoot.
50 Hingston Down.
50 Javall.
100 I.X.L.
100 Nouveau Monde.
100 Landegia.
50 Mynydd Gorddu.
40 Marke Valley.
35 New Wye Valley.
100 New Kitty.
60 Prince of Wales.
100 Postarena.
50 Pen-yr-Orsedd.
100 San Pedro.
70 South Devon.
30 West Chiverton.
40 West Kitty.
80 Wheel Jewell.
80 Yalwith.
50 Mynydd Gorddu.
40 Marke Valley.
35 New Wye Valley.
100 New Kitty.
60 Prince of Wales.
100 Postarena.
50 Pen-yr-Orsedd.
100 San Pedro.
70 South Devon.
30 West Chiverton.
40 West Kitty.
80 Wheel Jewell.
80 Yalwith.

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50 Cambrian, 21s.
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100 Chontales, 5s.
20 Devon Gt. Uni., £1 1/2.
50 Don Pedro, 16s. 3d.
25 Devila Moyar, £2 1/2.
100 Exchequer, 8s.
25 East Caradon, £1 1/2.
20 East Crebor, 27s. 6d.
20 Emma, £2 16s. 3d.
50 English-Austral., 18s.
40 Flagstaff, £1 1/2.
20 Frontino, £3 16s. 3d.
25 Glenrock Gold, £1 10s.
25 Hingston, £1 8s. 9d.
20 Leadhills, £2 17s. 6d.
50 London & California, 10s.
25 Marke Valley, £1 1/2.
40 New W. Caradon, 17s. 6d.
50 New Wh. Peavor, £2 1/2.
50 Nou. Monde, 23s.
75 Parys Corpor., 18s.
20 Panulicillo, £4 16s. 3d.
30 Prince of Wales, 25s.
50 Port Phillip, 11s.
50 Pestarena, 8s. 3d.
75 Rossa Grande, 5s. 9d.
10 Ruby Silver, £5.
10 Roman Gravels, £9 15s.
50 So. Devon Unit., 25s.
50 So. E. Wynad, £1 1/2.
20 S. Indian Gold, £1 16 3d.
20 Tolima, A., £3 1/2.
50 Trevecon Cons., 16s. 3d.
50 United Van and Glyn Lead, 11s. 3d.
30 West Caradon, £2 1/2.
10 W. Chiverton.
75 West Crebor, 8s. 6d.
40 West Devon, 13s.
10 Wheel Crebor, £4 1/2.

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PARIS, 1875.
BRONZE MEDAL, 1875.



ORDER OF THE CROWN OF PRUSSIA.



FALMOUTH, 1887.
SILVER MEDAL, 1887.

A DIPLOMA—HIGHEST OF ALL AWARDS—given by the Geographical Congress, Paris, 1875—M. Favre, Contractor, having exhibited the McKean Drill alone as the MODEL BORING MACHINE for the St. Gothard Tunnel.

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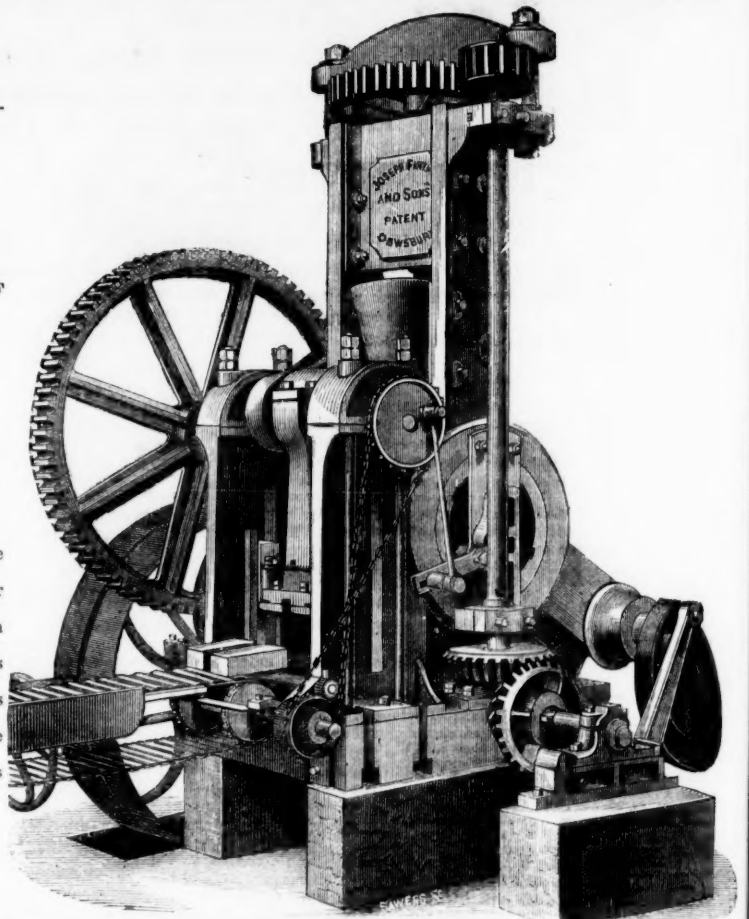
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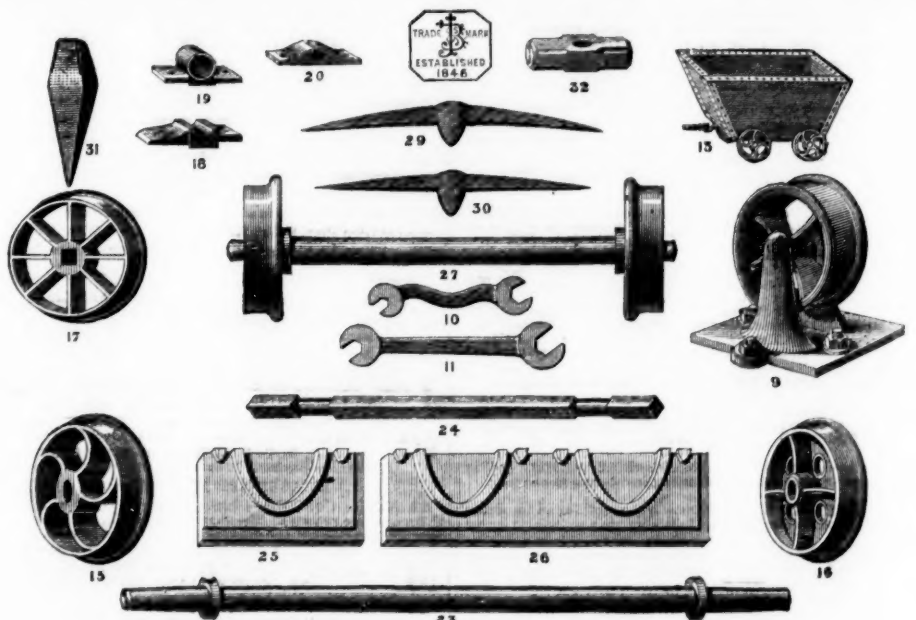
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It makes two bricks at once, and will make 12,000 to 14,000 Plastic Pressed Bricks per day, hard enough to go direct to the Kiln without drying; or it will make the bricks thoroughly plastic if required. For Works requiring a Machine at less cost the Machine is made to turn out one brick at once, and is capable of producing 8000 bricks per day.



The Machine can be seen at work daily at the Brickworks of the Patentees, Joseph Firth and Sons, Webster Hill, Dewsbury, as also their Patent Gas Kiln for Burning Bricks, which possesses the following amongst other advantages, viz.:—Economy in Fuel, Rapidity and Quality of Work, even Distribution of Heat, and Total Consumption of Smoke.

CRUCIBLE CAST-STEEL CASTINGS



J. BANHAM AND SONS,

MANUFACTURERS OF EVERY DESCRIPTION OF

Improved Cast Steel, Files, Solid Cast-steel Hammers, &c., STEEL WORKS, CARVER STREET, SHEFFIELD.

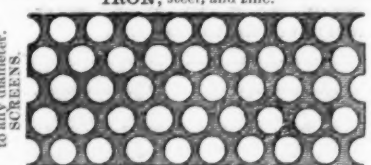
ESTABLISHED OVER THIRTY YEARS

PERFORATORS, WIRE WEAVERS, AND GENERAL IRONMONGERS,

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Millimeter holes perforated in sheet-copper, brass, IRON, steel, and zinc.



JIGGER-PLATES AND CYLINDRICAL SIEVES.

Manufacturers of Stamps-Grates, Sieves, and Riddles, for Mining and other purposes, by Self-acting Steam Machinery.

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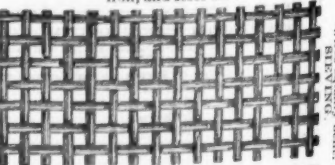
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SIEVES AND GRATES,

Shown at the Annual Exhibi-

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Lineal holes per inch woven in copper, brass, IRON, and steel wire.



JIGGER-BOTTOMS AND CRUSHER SIEVES.

SPECIALITY.—Thick Copper, Brass, Zinc, and IRON Perforations, Classifying-Sieves, Pierced Pulveriser and Stamps-Grates up to 289 holes to the square inch, Copper-bottom "Tinsifts," Spigot and Faucet Zinc Air-pipes, Powder Charges, &c.

The Kingston Mining Company

(LIMITED).

CAPITAL £25,000, IN 25,000 SHARES OF £1 EACH.

PAYABLE:—5s. on application; 5s. on allotment; 5s. three months after allotment; 5s. six months after allotment.

DIRECTORS.

DR. S. S. RODEN, M.D., Droitwich.
MAJOR JOHN GRAHAM, Denton House, Ilfley, Oxford.
EDWARD RENDELL, Esq., Whiteford Mills, Callington.
WALTER EDDY, Esq., Mineral Surveyor, Llangollen.
DAVID FORREST, Esq., 164, Gresham House, Old Broad-street, E.C.

BANKERS—THE CONSOLIDATED BANK (Limited), 52, Threadneedle-street, E.C.

SOLICITORS—Messrs. VENNING, ROBINS, AND VENNING, 9, Tokenhouse Yard, E.C.

SECRETARY—JAMES R. FORREST, Esq.

OFFICES,—164, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

PROSPECTUS.

This Company has been formed for carrying out an agreement for purchasing the Mineral Properties known as North Kingston Mine and Old Wheal Kingston, together with the Machinery and Plant thereon.

These extensive properties, which are about one mile from east to west and one mile from north to south, are held under lease from the Duchy of Cornwall, and are situated in the parish of Stoke Climsland, near Callington, Cornwall, in the run of the rich lodes known to exist in the district for silver-lead and copper ores; also in proximity to Old Holmbush, Kelly Bray, and Redmoor Mines, which were very productive of silver lead ores, the North and South lodes of the former passing through this property. The celebrated Devon Great Consols Mines are to the east.

An adit has been driven through several rich and well-defined lodes; in shaft has been sunk 40 fms. from adit, and levels have been driven at 18, 30, and 40 fms. depth with the most satisfactory results, the lodes being composed of beautiful quartz, capels, and copper pyrites, varying in width from 5 to 18 ft., with rich veins of silver-lead ore, in size from one to two feet wide, specimens of which have been assayed by Messrs. Johnson, Matthey, and Co., of London, and others, showing a very high percentage of silver per ton, and giving to the ores of this mine an unusually high market value, some specimens of the ores which have been assayed giving as much as 330 ozs. of silver to the ton.

An extensive quantity of ore ground has been opened, and a communication made between the adit and bottom level, which has proved the existence of rich silver-lead and blende ores throughout, and which are much richer in the bottom level than in any other part of the mine.

Reports by Mr. Thomas Sopwith, Mr. Walter Eddy, Capt. Secombe, Capt. Thomas Richards, of Hingston Down, Capt. Rodda, of Devon Great Consols, the late Capt. James Richards, of Devon Great Consols, and Capt. William Rowe, of West Frances, together with the several results of assays thereto appended, show that the mine is of an unusually rich and metalliferous character, that a large amount of ore has been proved, and they justify the directors in their firm conviction that this is an exceedingly rich mine, which will pay exceptionally good dividends.

These reports can be seen at the offices of the company.

Mr. THOMAS SOPWITH, when reporting on these mines on the 16th May, 1876, states:—"I consider you may fairly estimate that the 18 fm. level, now 80 fms. long, will be ore producing for 5 fms. in height above and 10 fms. in depth below, say 1200 square fathoms, averaging 8 cwt. per fathom, say 480 tons, worth at your present selling price 18l. per ton, equal to 8640l.; a satisfactory return, considering how little has yet been done, and that in all probability the best part of the vein has yet to be reached. If the works are vigorously prosecuted, by the end of this year (1876) you should arrive at a production of 30 or 40 tons of lead per month, and, say, 60 tons of blende."

In consequence of financial difficulties of the late proprietors the works were not vigorously prosecuted, and very little ore has yet been obtained from the 30 and 40 fm. levels, but Mr. Sopwith's report has been verified so far, that ores have been sold from March, 1876, to March, 1878 (taken chiefly from the 18 fm. level), which have realised 7853l. Mr. Sopwith's report having proved correct in this most important point, there is good ground for anticipating

that it will also prove correct in his estimate that on the works being vigorously prosecuted 30 or 40 tons of lead and 60 tons of blende per month will be raised—a quantity calculated to be sufficient to yield a dividend of 20 per cent. per annum.

Mr. WALTER EDDY, in a report dated August, 1880, says:—"The character of the lode and strata in this bottom level is, in my judgment, of the most promising nature for producing large bodies of ore in depth. I find that the mine has already produced about £8000 worth of ore taken from the shallow workings, and from the greatly improved indications in the bottom level, which has been opened out since the date of Mr. Thomas Sopwith's report, I shall be very much surprised indeed if his estimate of the future production, consequent on a vigorous prosecution of the works, be not greatly exceeded. I do not know a more promising speculation, or one more likely to be attended with successful results, than the sinking to and proving this fine powerful lode at deeper points."

I firmly believe that these trials will result in opening out a rich and profitable mine. There is splendid machinery on the mine necessary for developing it at great depth, and dressing apparatus to meet the requirements for a large monthly sale of ores."

Capt. JAMES CHYNOWETH in his report, dated 30th August, 1880, states:—"The lode in bottom of shaft is 4 ft. wide, and of a very promising character. . . . There are tokens of a very speedy improvement in sinking the next 10 fms., as there is a capital lode gone down in the bottom of the 40, fully worth £20 per fathom for lead and blende. . . . Judging from the general improvement of this level, exceeding the level above both in character of lode and strata, without a doubt in my mind sinking the shaft 20 or 30 fms. deeper will bring the mine into a very great success. . . . In the 18 fm. level the new south lode is of a most splendid character, 3 ft. wide, composed of lead, copper, small portions of quartz, &c."

Some of the ground has been taken away on tribute of 10s. in 20s., men having got good wages. No one can speak highly enough of this lode at the shallow depth."

The above quoted reports all concur in the opinion that as the mines increase in depth they will become richer. Mr. Sopwith estimates that if the works are vigorously prosecuted results of a highly satisfactory character will be obtained, while Mr. Walter Eddy and Capt. Chynoweth, who have recently reported on the mine, state that it has very much changed for the better since the date of Mr. Sopwith's report; Mr. Eddy stating that he will be very much surprised indeed if Mr. Sopwith's estimate of the future production of the mine will not be greatly exceeded, and Capt. Chynoweth reports that the lode gone down in the bottom level is worth £20 a fathom.

In conclusion, the directors would point out that there appears every probability of anticipating that within a few months the mine will be in a position to pay a dividend of 20 per cent., and that when the engine-shaft has been sunk 10 or 20 fathoms deeper the shareholders may look for very largely increased dividends. The machinery is in good working order. Altogether, a more promising speculation in mining, or one that seems so secure in its successful results, could not well be met with.

Prospectuses, with Forms of Application for Shares, may be obtained at the offices of the company, 164, Gresham House, Old Broad Street, E.C.

An agreement has been entered into between S. S. Roden and David Forest, dated August 24, 1880.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Messrs. ABBOTT AND WICKETT, stock and share brokers, Redruth (Oct. 21), write:—"Tin has gradually advanced during the week, but there has not been much activity in the share market, and in some instances prices have given way."

Wheal Prussia has attracted considerable attention, in consequence of an improvement in the eastern part of the mine. West Pevor, Pedn-an-drea, and North Busy shares have been largely dealt in. A fair business has been done in South Frances and West Basset at current rates. Subjoined are the closing quotations:—Blue Hills, 4 to 4½; Carn Brea, 3 to 3½; Cook's Kitchen, 1½ to 1½; Dolcoath, 5½ to 5½; East Pool, 3½ to 3½; Mellanear, 4½ to 5; New Cook's Kitchen, 1½ to 1½; North Busy, 3 to 3½; Pedn-an-drea, 1½ to 2½; Pendennis, 2½ to 3; Santa Gertrude, 17 to 18; South Condurow, 10½ to 11; South Crofty, 12½ to 13; South Frances, 14 to 14½; Tincroft, 16½ to 16½; West Basset, 17 to 17½; West Pevor, 16½ to 16½; West Frances, 10 to 11; West Tregus, 5 to 5½; West Tregon, 19 to 20; Wheal Agar, 5 to 5½; Wheal Basset, 4 to 4½; Wheal Grenville, 10 to 10½; Wheal Kitty, 4½ to 5; Wheal Pevor, 29 to 29½; Wheal Prussia, 2 to 2½; Wheal Uny, 2½ to 3.

Mr. S. J. DAVEY, mine shareholder, Redruth (Oct. 21), writes:—"A moderate business has been done in our market during the week at fluctuating prices. Dolcoath shares have risen 20s. East Pool shares have fallen 30s. and North Busy shares have advanced 50s., and subsequently declined 20s. West Basset shares have advanced on an improvement in the mine 30s. West Pevor shares rose 20s., Wheal Agar 10s., Wheal Grenville 10s., and Wheal Prussia 15s. Wheal Pevor shares have declined. To-day market is quiet, at the following prices:—Blue Hills, 3½ to 4½; Carn Brea, 3½ to 4½; Cook's Kitchen, 1½ to 1½; Dolcoath, 5½ to 5½; East Pool, 3½ to 3½; Mellanear, 4½ to 5; New Cook's Kitchen, 1½ to 1½; North Busy, 3 to 3½; Pedn-an-drea, 1½ to 2½; Pendennis, 2½ to 3; Santa Gertrude, 17 to 18; South Condurow, 10½ to 11; South Crofty, 12½ to 13; South Frances, 14 to 14½; Tincroft, 16½ to 16½; West Basset, 17 to 17½; West Pevor, 16½ to 16½; West Frances, 10 to 11; West Tregus, 5 to 5½; West Tregon, 19 to 20; Wheal Agar, 5 to 5½; Wheal Basset, 4 to 4½; Wheal Grenville, 10 to 10½; Wheal Kitty, 4½ to 5; Wheal Pevor, 29 to 29½; Wheal Prussia, 2 to 2½; Wheal Uny, 2½ to 3.

Mr. J. H. REYNOLDS, stock and share broker, Redruth (Oct. 21), writes:—"During the week a good business has been transacted in all the leading shares. South Frances and West Basset shares in good demand at higher prices, on the way on parties taking profits. Subjoined are the closing quotations:—Blue Hills, 4 to 4½; Carn Brea, 3 to 3½; Cook's Kitchen, 1½ to 1½; Dolcoath, 5½ to 5½; East Pool, 3½ to 3½; Mellanear, 4½ to 5; New Cook's Kitchen, 1½ to 1½; North Busy, 3 to 3½; Pedn-an-drea, 1½ to 2½; Pendennis, 2½ to 3; Santa Gertrude, 17 to 18; South Condurow, 10½ to 11; South Crofty, 12½ to 13; South Frances, 14 to 14½; Tincroft, 16½ to 16½; West Basset, 17 to 17½; West Pevor, 16½ to 16½; West Frances, 10 to 11; West Tregus, 5 to 5½; West Tregon, 19 to 20; Wheal Agar, 5 to 5½; Wheal Basset, 4 to 4½; Wheal Grenville, 10 to 10½; Wheal Kitty, 4½ to 5; Wheal Pevor, 29 to 29½; Wheal Prussia, 2 to 2½; Wheal Uny, 2½ to 3.

Mr. JOHN CARTER, mine shareholder, Camborne (Oct. 21), writes:—"The share market has been active throughout the week, and prices have steadily improved, in consequence of the upward tendency of the tin market, and the quiet. On the 15th inst. the tin standards were advanced to 84s. for common tin, 85s. for refined. Closing quotations annexed:—Blue Hills, 3½ to 4½; Carn Brea, 3½ to 4½; Cook's Kitchen, 1½ to 1½; Dolcoath, 5½ to 5½; East Pool, 3½ to 3½; Mellanear, 4½ to 5; New Cook's Kitchen, 1½ to 1½; North Busy, 3 to 3½; Pedn-an-drea, 1½ to 2½; Pendennis, 2½ to 3; Santa Gertrude, 17 to 18; South Condurow, 10½ to 11; South Crofty, 12½ to 13; South Frances, 14 to 14½; Tincroft, 16½ to 16½; West Basset, 17 to 17½; West Pevor, 16½ to 16½; West Frances, 10 to 11; West Tregus, 5 to 5½; West Tregon, 19 to 20; Wheal Agar, 5 to 5½; Wheal Basset, 4 to 4½; Wheal Grenville, 10 to 10½; Wheal Kitty, 4½ to 5; Wheal Pevor, 29 to 29½; Wheal Prussia, 2 to 2½; Wheal Uny, 2½ to 3.

to 2½; West Tregon, 50 to 52; West Tregon, 19 to 20; Wheal Agar, 6 to 6½; Wheal Basset, 4 to 4½; Wheal Grenville, 10 to 10½; Wheal Kitty, 4½ to 5; Wheal Pevor, 29 to 29½; Wheal Prussia, 2 to 2½; Wheal Uny, 2½ to 3.

Mr. M. W. BAWDEN, Liskeard (Oct. 21), writes:—"The mining market continues firm, and most shares have further improved in unison with the steady advance in tin. There is more enquiry for some of the low-priced progressive mines. Phoenix United and Wheal Agar shares in demand on improvements. Subjoined are the closing quotations:—Bedford United, ½ to 1; Carn Brea, 3 to 3½; Gunnislake (Clitters), 4 to 4½; Cook's Kitchen, 1½ to 1½; Dolcoath, 5½ to 5½; Devon Consols, 11 to 11½; Devon United, 1½ to 2; East Caradon, 1½ to 1½; East Crebor, ¾ to ¾; East Pool, 38 to 39; Gawton United, 1 to 1½; Glasgow Caradon, 1½ to 1½; Herodfoot (12,000), 1 to 1½; Hingston Down, 1½ to 1½; Mark Valley, 1½ to 2; New West Caradon, ½ to ¾; North Herodfoot, ½ to ¾; Phoenix United, 3½ to 3½; Prince of Wales, 1 to 1½; South Caradon, 60 to 62½; South Condurow, 11 to 11½; South Crofty, 13½ to 14; South Devon United, 1½ to 1½; South Frances, 14 to 14½; Tincroft, 16½ to 17; West Basset, 16 to 16½; West Caradon, 2½ to 2½; West Frances, 10 to 10½; West Mary Ann, 1 to 1½; West Phoenix, 2½ to 2½; West Tregon, 50 to 51; West Crebor, ¾ to ¾; Wheal Agar, 6½ to 7; Wheal Crebor, 3½ to 3½; Wheal Grenville, 10 to 10½; Wheal Jane, 3½ to 3½; call paid; Wheal Pevor, 29½ to 29; Wheal Hony and Treawny United, 2 to 2½; Wheal Uny, 3 to 3½.

MANCHESTER.—Messrs. JOSEPH R. AND W. P. BAINES, sharebrokers, Queen's Chambers, Market-street (Oct. 21), write:—"The amount of business reported for the past week is far in excess of what we have had to notice for some time, and the prices realised have been generally better than what were ruling a week ago. Evidences are becoming prominent, which tend to prove that trade generally is in a much healthier condition than has been the case for a long time, and also than many professed to believe; but the fact appears to be making itself felt, and consequently a much more buoyant tone pervades the markets all round. Had this been the case it appears more than probable that the delays and difficulties raised by the Porte with regard to Dulcigno would have tended to weaken the markets, but as it is this appears to cause operators very little anxiety, and the prospect of better times rules the values. The changes of quotations are very one-sided, the great majority being advances, some of which are fairly large, whilst among cases of decline there are none of very great moment."

BANKS, though not dealt in to any great extent, rule firm, and values show improvement where dealings are marked, and the alterations are:—Higher: National Provincial, ½; ditto, new, 1; Parr's, ½; Bank of Liverpool, ½; Manchester and Liverpool District, ½; Bank of Oldham, ½; and Oldham Joint-Stock Bank, ¾. Lower: Consolidated, and Manchester Joint-Stock, ¾ each.

INSURANCE have been brisk, at prices without material change. A general business has been done without special run in any one undertaking. Variations are somewhat irregular:—Higher: Royal Liverpool, ¾; British and Foreign Marine, ¾; Commercial Union, ¾; Queen, ¾; and Thames and Mersey Marine, ¾. Lower: Ocean Marine, ¾; Imperial Marine, ¾; and Equitable Fire, ¾. IRON, COAL, &c., AND MINING.—A sharp upward movement has developed itself in this class of securities, but as yet it has only extended to the best known and most generally dealt in concerns, especially as regards business done. The prices obtained show a marked improvement, especially in Bolckow, Ebbw Vale, and Nant-y-Glo, the two former having produced many transactions. Compared with last week the following are:—Higher: Bilbao Iron Ore, 2½; Bolckow (fully paid), 1¾; ditto (12l. paid), 1¾; Nant-y-Glo and Blaiva, 3; Ebbw Vale, ¾; Consett Iron, ¾; Palmer's Shipbuilding, ¾; and Tharsis Sulphur, &c., 1; whilst Great Laxey Lead, United States Rolling Stock, and West Cumberland Steel, &c., are ½ each lower.

COTTON SPINNING AND MANUFACTURING continue to rule strong, and a fresh substantial rise is established. The market may be said to improve several shillings all round, with every appearance of maintaining the advance, and indeed going further, for the margin now shows more profitable working to be if not actually secured at any rate in the immediate future, and if this is established much better figures may be looked for with confidence.

TELEGRAPHS.—Western and Brazilian shares have been done in repeatedly at advancing prices, but with this exception very little has been doing in them. The quotations, however, show a rise of ½ in Western and Brazilian, ¾ in Anglo-American, and ¾ in Eastern, whilst there are no instances of decline.

CANALS have stirred, and quotations were changed all for the better, Peak Forest being 2, Macclesfield 1, Ashton and Oldham 1, and Lancaster 1, but

without much actual business. Corporation Stock and Water, &c., Annuities have become enquired for, and the consequence is a rise of ¾ in Oldham Gas and Water Annuities, and 1½ in Manchester Corporation Stock, business being marked at the better figures. Miscellaneous do not show many dealings, but the tone is quite firm. Manchester Carriage and Tramways, A, are ¾, London and Manchester Plate-Glass ¾, and Household Stores are ¾ higher, while Manchester Carriage, &c., Co.'s are ¼ easier.

RAILWAYS.—The alterations noticeable in railways during the week in the majority of cases are not great, yet the Scotch lines mark high, and at considerably important advances. Caledonians have been as high as 115½, and North British 91½; and, comparing closing quotation, a rise of 1½ and 3 respectively is established. Brighton, A, have again suffered from severe fluctuations, being at one time 2 down, and only a trifle above this at to-night's close. Other rails quite irregularly, the leading lines not being helped by their traffics. In Caledonians the differences in prices are not of much moment, although the tone improved to-day on the Grand Trunk return 508½ increase. Americans have led the way, Erics being \$1, Readings \$2 higher, the latter consequent on the favourable Telegraph and Standard remarks on their September takings, and basing further calculations on this the shares should be worth more than present value. Pennsylvanians show a decline of ¾.

HULL.—Mr. W. FOWLER SUTTON, stock and share broker, St. Mary's Chambers (Oct. 21), writes:—"The stock markets exhibit very little changes in prices as regards railways by comparison with those ruling a week ago. Caledonians and North British, however, are in good demand on their excellent traffic receipts and prospects, and show advances of 1½ and 2 per cent. respectively. Berthas have fluctuated considerably, but not so violently of late, and the reason of the fall in the price of this stock yet remains a mystery to the market. To-day's Trunk traffic has infused more life into Canadian stocks, and a sharp advance has taken place in all the Trunk preferences. It is the best weekly receipt the company has had since an isolated one about this time five years ago. American stocks are firm, and, if the market opinion is worth anything, we shall yet see a considerable rise all round. Local stocks are quiet. The directors of the Hull Dock Company have decided to recommend that they do not make the new dock, and as fears of having to raise fresh capital will now be removed the stock should rally from its present depressed price—about 87½. Hull Banks, 11½; Yorkshire Banks, 23½; London and Yorkshire ditto, 29s. 6d.; Earle's Shipbuilding, 18½; Hull Trams, 10.

NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Messrs. SPENCE and IRWIN, stock and share brokers, Grey-street (Oct. 21), write:—"During the past week our market has been fairly active, owing to the more settled appearance of the Eastern Question, and the continued satisfactory Board of Trade Returns. Bede Meta's have changed hands during the week at 2 dis., which price is still bid. Sellers hold out for 1 dis. Bolckow, Vaughan, and Co.'s shares are in fair demand, and in consequence the drooping tendency mentioned in our last has been stayed. Prices to-day—A shares, 3½ prem.; B, 2½; and Five per Cent. Preference, 20½. In Consett Iron Company the feature of the week has undoubtedly been the rise in these shares. On the 14th inst. 12½ prem. was the bid, and they were then offered at 12½ prem., but on Monday these were soon bought up, and 13 prem. was bid in vain, one; and the only then seller asked 13½ prem.; this rather keen offer for a few days, and it was not until yesterday that business was effected, and now 14 prem. is bid without tempting sellers. Probably 15 prem. would be accepted. Consett Spanish Ore shares have been dealt in at 29s. 3d. to 29s. 6d., and the latter price is still bid, whilst sellers stand for 30s. Darlington Iron shares have changed hands at 12 dis., which price is still bid; sellers at 11 dis. John Abbott and Co.'s shares remain exceedingly flat at 25 dis. Skerne Iron and Teesside Iron and Engine Works shares remain the same as last week. Green Heath Mining Company having on Tuesday declared a dividend of 4s. per share, the demand for the shares has improved, 8½ prem. being now bid. Hexham and Edmondbyers mining shares are offered at 17s. 6d. each without tempting buyers. Teesside mining shares are in very good demand at 4s. 6d. for ordinary and 5s. 6d. for preference shares. No sellers at present.

SCOTCH MINING AND INDUSTRIAL COMPANIES' SHARE MARKETS.

EDINBURGH.—Messrs. THOMAS MILLER AND SONS, stock and sharebrokers, Princes-street (Oct. 21) write:—"There has been a fair improvement in some Scotch railway stocks during the week ending to-day. This afternoon the market in North British has been very lively, and the price has gone up to 91, showing a rise of ¾. Edinburgh and Glasgow ordinary stock has also risen from 34½ to 35½. Caledonian has been good, and the price has risen to 115½, an advance of 1½. Glasgow and South-Western has risen from 113½ to 114½. Great North of Scotland has improved from 65 to 67½. This stock was in renewed demand this afternoon at the enhanced quotation. Highland advanced at one time to 111, but has gone back to 110½, at which it shows a rise of ¾. Bank stocks have been rather offered. British Linen has gone from 271 to 269, and Commercial from 351½ to 344½. Insurance shares have been steady. Queen have risen from 81s. 6d. to 85s. Property Company shares have been weak. Colonial and American Investment Companies have been firm without much change. There has been some movement in mining and mineral shares. Clyde Coal have advanced from 51s. to 54s. 6d., Glasgow Port Washington from 50s. to 51s., Marbella Iron Ore from 68s. to 70s. 6d., Tharsis from 31½ to 32½. Benhar Coal have receded from 25s. to 23s. 6d., Huntington Copper from 63s. to 61s. 6d., Dalmeny Oil have risen from 12 to 13.

IRISH MINING AND MISCELLANEOUS COMPANIES' SHARE MARKET.

DUBLIN, OCT. 21.—There has been scarcely a transaction in mining shares during the week, but prices are nominally the same. This position of affairs is, however, the less unsatisfactory when it is considered that the general market is extremely dull, and that sales even of the safest stock are with difficulty effected.

CORK.—Messrs. J. H. CARROLL AND SONS, stock and share brokers, South Mall (Oct. 20), write:—"Markets are all rather dull, and business limited, owing to the very disturbed state of the country. Great Southern remain about 116½ to 117, and Midlands at 91½ to 92, while Bandon were done at 95, and Passages fell to 10 per share. National Banks are 66½, and Munsters 1½, while Provincials were done at 62. Cork steam Packets remain at 13½, and Gas shares 7½. Lyons shares were done at 4½ to 5, and Daly's at 2½ to 3. Gresham Hotels are 3½, and Cork Docks (Debentures) were sold at 20 per cent.

MINING IN CALIFORNIA.—The latest reports from the Nevada, Sierra, and other districts are decidedly more favourable. The Inyo Independent states that Swansea district, under the impetus of important sales and others under way, has a number of men prospecting. A little work is being done on the Palma ledge, near Cerro Gordo. The greatest known mineral outcrop of the whole chain—the Buena Vista, or Crapo ledge—is under control of a heavy San Francisco company, and is being opened. The Enterprise Mine, the property of Hawley and Keeler, is working a few men. Throughout the great belt there are more men employed, and a greater degree of activity displayed than at any time for years past. With regard to the new enterprise at Downville, the Mountain Messenger states that on the Forest Queen quartz ledge a new tunnel is now being run 100 ft. below the old one, and a surprisingly rich chimney, 3 ft. wide, has been found with a well defined wall. The quartz is thick with gold, which can easily be discerned with the naked eye, and will at least mill 81000 to the ton. Arrangements have been made for putting up a quartz-mill this fall, which will afford the Ore and adjacent mines an opportunity of prospecting their quartz veins at a comparatively trifling expense. If this enterprise is successfully carried through, it will be the dawn of a new era in the history of Downville. The Placerville Republican states that the bed-rock flume near that place is making steady progress, and it is a most substantial affair. The sleepers are fastened to the bed-rock by bolts shaped something like old-fashioned clothes pins, inserted in drill holes, and fastened there by pouring composition round them. In Coloma Canyon, Georgetown, near the Rosecrans Mine, Martin and Miller have discovered a quartz ledge that bids fair to become a bonanza. Messrs. Flanagan and Blood, of San Francisco, have made a commencement on Hoosier Bar, famous for the rich yield of gold obtained from it in early days, one season's run, it is said, being \$90,000. The necessary machinery is en route, and three eight-hour shifts of miners are sinking the shaft preparatory to undermining the river. The mine is situated a little above Mammoth Bar, which is being satisfactorily worked by an English company on the Placer side of the river. The Grass Valley Union states that at the Mammoth Bar Mine a good deal of water has been encountered, but this is easily handled by the large pumps which are used, and the gravel channel is being gradually drained, so that the extraction of the gravel can soon be commenced. The depth of the gravel is from 60 to 70 ft., but the "pay" is looked for on the bed-rock, where the stockholders hope (from the former richness of above and below the claim) that "mule loads" of the shining ore will be found.

THE LEADVILLE MINES.—The bullion shipments from the Leadville smelters for September are the greatest ever sent from the camp in a single month, the figures being \$1,502,085, which will be gratifying to the residents of Leadville, and will astonish the croakers who have let loose their mining stocks, and have insisted that Leadville has seen its best days. That the weakening of a few mines can have any effect on the real prosperity of this section of country, is preposterous. There is too much territory yet undeveloped; there are too many new ore bodies being found, and too much ore already exposed, to make it any way probable that the output of ore or the production of bullion is to be decreased very soon. It is probable the bullion shipments for the year 1880 will exceed \$16,000,000. A very interesting feature connected with this production is the fact that three months ago the cry started that Leadville was failing, and ever since that time stocks have been rapidly declining. The increase of production, however, shows, August more than July, a gain of \$241,913, and September, a shorter month by one day, gains over August the sum of \$205,733. There is no camp in the world that can compare with this, either in past history or present prosperity.

All four of the furnaces of the La Plata Mining and Smelting Company have been in constant operation. There is on hand a large supply of ore, it being fully equal to that held at the beginning of the month. The bullion shipments have been 556 tons, containing 155,400 ozs. of silver. The silver value amounts

to \$175,602, and the lead to \$55,114, or a total of \$230,716. There are 240 bars of bullion on hand. The California smelter has been running constantly both furnaces, and doing well. There is a large amount of ore on hand. Mr. M. E. Smith, who has charge of the La Plata Works. The shipments of bullion amount to 315 tons, containing 65,150 ozs. of silver. The silver value amounts to \$74,750, and the lead to \$31,232, or a total of \$105,982. There are on hand 2500 bars of bullion. One furnace of the Harrison Reduction Works was put in blast on Aug. 23, the other on Sept. 3, since which time both have been running. The works are well supplied with ore, having over 1500 tons on hand, and receiving large amounts. This has nearly all accumulated during the month. Mr. E. C. Jewett, formerly the assayer of the works, has been put in charge of the furnaces, in the place of Professor Fluegger, whose time is occupied with his private assay business. The shipments of bullion amount to 29 car loads, weighing 615,845 lbs., assaying on an average 146% of silver and 1.5th oz. in gold to the ton. The value of the silver amounts to \$50,958, the gold to \$1230, and the lead to \$30,841, or a total shipment amounting to \$82,829. In accordance to a telegram from New York, Mr. W. R. Breck yesterday turned over the Climax Mine to Mr. T. F. Van Wagenen, the newly appointed manager. Mr. Van Wagenen now manages both the Climax and Amie. Some fine specimens of ore were yesterday shown, said to have come from the California tunnel. A gentleman who visited the property states that there is a 4-ft. vein of ore in an incline running north-west from the tunnel, at a point 550 from the mouth of the tunnel.

THE COURT GRANGE AND MYNYDD GORDDU MINES.

Amongst other evidences of the revival in trade is the increased activity in the lead mining industry, which forms so important an element in the welfare of our country; and one remarkable instance of this activity is the recent completion—solely for mining purposes—of a most extensive reservoir at Craig-y-pistyll, on the River Lerry, some 11 miles from Aberystwyth. This reservoir—which has the largest capacity of any in this or the neighbouring county, being estimated to contain upwards of 50,000,000 gals. of water—has been constructed during the last two years, at the joint cost of the Mynydd Gorrdu and Court Grange companies, for the purpose of obviating the great disadvantage they have hitherto laboured under in the working of their mines, owing to their supply of water frequently running short, and, as that is their sole motive power, stopping their operations. Being situated amidst the mountains, very near the apex of the water-shed of the district, there is no natural storage for the water above this level, and however frequent and plentiful might be the supply of rain, they found by experience that a few days sufficed for all the surplus water to escape to lower levels, while the ordinary volume of the Lerry was not sufficient to supply their wants and the wants of some other mines which draw their supply from the same source, and especially those who benefited with the above mines by their bold enterprise. Hence the necessity for artificial storage, now most effectually secured by this extensive work, which is acknowledged by the best practical authorities to have been carried out in a most substantial and workman-like manner. Fortunately for the constructors, the work, although expensive and tedious from its only being able to be carried on at favourable periods of the season, has not been so costly as would appear at the first blush. The conformation of the ground has been carefully studied, and advantage taken of a site which seems formed by nature for the purpose; the River Lerry, at this spot, running through a mountain gorge, which only needed the effectual damming of the outlet to form a natural lake about three-quarters of a mile long, and varying from a quarter to half-a-mile in width. It will be understood, however, that even although this did away with the necessity of any embankment around the greater portion of the reservoir, it required a dam of great strength to cope with the immense weight of water implied by a storage of 50,000,000 gals. The construction, therefore, has required no little engineering skill, and it may interest some of our readers, and especially those who may be affected by an overflow therefrom, if it were not so substantially made, to learn that the materials used, the massive character of the embankment, its mode of construction, and the excellence of every part of the workmanship, are such that nothing less than a convulsion of nature is ever likely to affect its stability. To those who know how abundant the trout are in the upper section of the River Lerry it will be obvious that the fishing in this lake will soon be very valuable, and the directors of the two above-mentioned companies have done well for their shareholders in securing them a share in the fishing, jointly with Earl Lisburne and Sir Pryse Pryse, portions of whose lands comprise the area occupied by the reservoir, and to the local shareholders especially this will prove a pleasant boon. Having thus described this important and useful work, we turn our attention to the companies who have undertaken it, to both of whom we wish the success that their enterprise deserves.

The Court Grange Mine is on the Earl of Lisburne's property, about two miles from the Bow-street Station, and, after a short period of inactivity while prices of lead ruled so low, and the intermittent character of the water supply so sadly interfered with the profitable working of the mine, has recently been recommenced with renewed vigour and increased capital, now that the first named disadvantage has been effectually cured and the former one modified. The company have just adopted rock-drills, so as to more rapidly develop their extensive mine (a valuable system hardly yet used in this country, where we are difficult to move out of our old-fashioned grooves), and having a complete and well-designed plant, and (what is still more important) a good mine with an extensive run of well-known lead-producing lodes and large reserves of ore, are likely to realise good profits for their shareholders.

We turn, however, with even greater interest to the Mynydd Gorrdu Mine, as undoubtedly destined to very soon assume a leading position amongst the rich Cardiganshire lead mines, it being the universal opinion amongst the best authorities that it is one of the great prizes of the district. We well remember the excitement in the neighbourhood, and, indeed, amongst the mining community in London and elsewhere, when the principal lode in the mine was laid open at surface for some 80 or 90 yards, showing huge boulders of lead, mixed with a rich gossan, comprising all those component parts that seem to delight miners, and embedded in what they term a "kindly country"; there was a scramble for the prize, and many have been the enquiries here why the Londoners into whose hands it fell have not more rapidly developed its undoubted wealth. It appears that there were several other reasons for the delay besides the uncertainty of the water power, and we cannot better describe them than by quoting from a little history of the mine that appeared some time ago in the *Miner's Journal*, from the pen of a gentleman many years resident in this town, and one of the best authorities in the county on Cardiganshire mines.

The Mynydd Gorrdu, or (as it is described in the square No. 59 S.E. of the Government ordnance map) the Mynydd Gorrdu Lead Mine, is situated in one of the best mineral districts of Cardiganshire, about seven miles from Aberystwyth, and about two and three miles respectively, from Bow-street and Llanfihangel Stations of the Cambrian Railway. The geological formation is the clay-slate, and the lodes run nearly due east and west, being similar in both respects to the most successful Cardiganshire and Montgomeryshire mines. These outcrops of the four parallel lodes already discovered therein will be found marked in the Government geological map above referred to, and one of them—the great champion lode of that district and over 20 ft. wide—is laid down therein for some miles, and has been traced even much further since that map was issued. At the spot where the character of this lode, and the country in which it is embedded, and indeed all the geological and other surroundings, most accurately resemble Mynydd Gorrdu—at the Haven and Henfvelch Mines—it is recorded that in the reign of Queen Elizabeth (when the pills of lead used to be carried on no other ponies' backs to the ancient smelting works near Eglwysbach) the Duke of Leeds, Earl Powis, Lord Burleigh, and the Earls of Derby realised, even by the then rude modes of working, and when lead was only worth about 6d. per ton, 1,400,000l. profit. The blocks of lead broken from the Mynydd Gorrdu lode, both at surface and at the 24, were composed of solid galena, incased in carbonate of lead, interspersed with gossan and carbonate of lime, forming such a matrix as is rarely seen, and which exactly like those broken at the Haven Mines when partially worked in more modern times, and although it is impossible to carry on now, that Mynydd Gorrdu will eventually yield as largely as those mines, in which case the present improved appliances, and the increased value of lead, ought to ensure even larger profits than were made in ancient times.

In the two mines immediately adjoining Mynydd Gorrdu, both on the east and the west, and, indeed, at almost every other point where this lode has been opened upon (which has chiefly been done since, and owing to, the rich discovery made at Mynydd Gorrdu when the eastern pits were first opened on the back of the lode at surface) good lead has been found, and enough has been done to indisputably prove that it is one of the most important and masterly lodes in the whole county, but, of course, by far the most important evidences of its character is the enormous returns made therefrom at Haven and Henfvelch.

One peculiarly favourable feature of Mynydd Gorrdu is that here the champion and another parallel lode interleave with each other, and form junctions with each other both longitudinally and vertically, the effect of which has been to form, even close up to surface, such a deposit of ore as caused at the time when it was first discovered quite an excitement to the neighbourhood; such an extraordinary surface discovery having hardly been known within the memory of man, even in this rich lead-producing county. So extraordinary was it that there was a scramble to secure this rich prize, everyone wanting the whole, not merely a portion, which resulted, as usual, in the parties interested quarrelling among themselves, issuing injunctions in Chancery, and causing a suspension of all the works except such as were requisite to keep the lease alive; indeed, until the present enterprising proprietors obtained a preponderating influence the litigation seemed likely to be interminable.

With the new management, whose activity and indomitable perseverance under great difficulties deserves credit, a very different state of affairs supervened. The litigation having been closed and the title cleared negotiations (which proved to be very difficult and tedious) were at once set on foot to secure a continuous and plentiful supply of water-power, without which the mine, with all its reputed wealth, was almost valueless, the then existing supply of water being very intermittent, and even at the best of times insufficient to carry on simultaneously the operations of pumping, drawing, crushing, and dressing, in all of which water was to be the motive power. To effectually remedy this state of things it was necessary to bring the water from a distance of several miles, and to construct in the midst of the mountains an artificial lake spacious enough to hold four months' supply of water, a costly and tedious work, which, with the co-operation of the neighbouring Court Grange Mine, has just been brought to completion, and now there is no doubt that Mynydd Gorrdu will very soon show how rapidly it can send to market the lead, of which it is indisputably proved it possesses almost any quantity. It does the management great credit that, even pending the construction of this reservoir (which is to contain 50,000,000 gallons of water), and in spite of the intermittent character of the water supply and the consequent frequent interruptions and delays, they have all along been gradually opening up and developing the mine, which has been done in a most masterly manner.

The surface plant is very complete and compact, and remarkably well laid out; it is already well able to treat up to 50 tons of lead per month, and has been so designed as to be easily extended at a very small cost, when (as is certain to be

the case eventually) the mine makes larger returns than that quantity. Underground the main shaft has been sunk to about 50 fms. from surface, levels driven immediately at the adit, and at 12, 24, and 34 fms. below it, and the continuity of the splendid courses of ore laid open at surface effectually proved. About 8000l. worth of lead and blende has been sold from these comparatively shallow workings, a very good earnings, the much greater returns that may eventually be expected from this mine, especially at every fathom that has been sunk or driven proves more and more that the great masses of ore that, judging from what has been already seen, are reasonably to be expected still lay somewhat deeper.

The Mynydd Gorrdu Mine possesses a local interest in another respect, the company having been the pioneers of the system of purifying the refuse from the lead dressing, and preventing the pollution of the river therefrom. It was, perhaps, not altogether voluntary, for they were amongst the first who were threatened with an injunction under the Rivers Pollution Act; but, none the less, the system they introduced, which has been followed by others since then, was successful, as evidenced by the following extract from one of the reports of the Inspector to the sanitary authority of Aberystwyth, in this respect and difficult question:—"Before leaving this matter, it may not be out of place to state that the commendable efforts, with apparent success, are made already at Mynydd Gorrdu, in order to purify the polluted water before leaving the spot by means of a series of pits and ponds. The water finally leaves as clear as from any ordinary fish-pond, and does not seem to injure the quality of the stream it flows into."

We have called attention to the enterprise of these mines even in bad times, and with serious disadvantages to contend with, but we must not forget to mention that, on the other hand, they enjoy one great advantage over most other lead mines, the possession of which has no doubt much helped to embolden them in tackling such a work as this reservoir, which, if constructed near one of the large towns for the purpose of water supply, might well have cost 20,000l. or 30,000l. They both (but especially the Court Grange Company) have a large quantity of silver in their lead, and consequently realise from 3d. to 5d. more for their produce even than the celebrated Van Mine, which, although it has little or no silver intermingled with its lead, is well known for the high percentage to which it dresses its ore up, while the difference between their prices and that of other mines which only produce what is called potters' lead is considerable. This is a most important feature, especially when the price of lead is low, as it enables mines possessing this advantage to return profits even when others cannot pay their way. For example, in Saturday's *Miner's Journal* there are mentioned sales of lead from two Cardiganshire mines (the ore from one of which contains a very fair proportion of silver) at 11d. 18s. and 10d. 3s. 6d., while on that very day the Court Grange Company sold 56 tons of their lead at 13d. 17s. 6d. per ton, and the Mynydd Gorrdu Company's two recent sales of lead have realised 13d. 5s. 6d. and 13d. 3s., while they have sold as high as 13d. 17s. 6d. per ton—not in inflated times, but even during this period of trade depression.

To call attention to the pluck and enterprise of these two proprietors in constructing this splendid reservoir, and to wish them the success they deserve, is our special theme here, but we none the less wish well to the others, who, like they, have spent large sums of money in mines in Cardiganshire, and cannot help thinking how different might now be the state of affairs in this country had the 300,000,000l. British capital (which is calculated to have been lost in foreign loans and schemes) been applied to the development of home industries, and even in this country alone an immense amount of capital might even yet be profitably applied in utilising the undeveloped wealth with which it undoubtedly teems, and which, with the improved appliances of modern times, ought to return even more millions of profits than it has done in the past.

—Aberystwyth Observer, Oct. 18.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Since the last meeting of Parys Corporation the ores sold have been—ochres, 412l.; copper ore, 1353l.; copper precipitate, 360l.; total, 2125l. The eight months' costs have been 3400l. There are, however, in the mine ready for sale ores to the value of 2530l., some of it copper raised through the above cost. The cash in hand is 3000l., making actual assets over liabilities 5500l. Besides which there are some thousands of unissued shares. The company, therefore, is in a very good position, and with an improvement in copper the returns might be doubled, and a profit made, irrespective of the 90 cross-cut south.

The Palladras lode was one of the richest in the Polrose district, and this also runs through Polrose, and a cross-cut in the 90 will intersect it in about 15 fms., so that there are three important points to come off, and either one would make the mine. The Margaret lode is now opening out tribute ground.

We shall know before long what the lode is worth in D'Eresby Mountain at No. 6 level. If as good all through as the 2 ft. cut into, there would, as the agent states, be no mine like it in all Wales. We do not, however, expect this. If the lode is as good throughout at No. 6 as it was at No. 5 the mine will be a great one, and we shall, of course, commence sinking to another level as soon as possible.

In reply to many enquiries, we may state positively that the Great Gorse lode, which is in two parts, the heading and hanging, passes through the whole length of Aberllyn and then into the adjoining mine beyond. Between D'Eresby Mountain and Aberllyn there is D'Eresby Consols and other ground through which the heading part passes. The soft part is supposed to be under the lake, and it is generally supposed the lake itself is in the lode. These parts come together in Aberllyn, yielding large quantities of blende down to the No. 2 level, and we hope soon to cut lead in the heading at No. 3, and, perhaps, in the Valley cross-cut.

About this time last year we called attention to the dangerous state of South Frances, and showed that unless a large outlay was made a rather serious state of affairs might arise. This was denied by the officials, and we were pretty well abused in certain quarters for letting the outside world know the truth. The shares were then at 10l., and to show how wrong (?) we were in our strictures, increased dividends were paid, and shares were got up to 15l. Our own opinion then was that the game would be kept up until shares were pretty well dispersed among outsiders; and how far we were justified both in our remarks and in our opinion a paragraph in the West Briton of the 14th will show. It says—"The great body of adventurers (in South Frances) were not a little surprised to hear that Captain Abraham James stated at West Basset meeting that the adventurers in South Frances had more water in the mine than they could possibly contend with, and difficulties too numerous to mention." "Perhaps it is owing," remarks the West Briton, "to these difficulties too numerous to mention, and from their being unable to cope with the water, which difficulties were unknown to the great body of shareholders, that two large adventurers have recently sold every one of the shares they held in South Frances."

We will only add to this, that just what has happened we foretold, on the best information, twelve months ago, in these notes; and the question now arises, what will have to be done, if the company fails to amalgamate with West Basset?

The ore at Wheal Crebor brought 1968l. 11s. 6d. The cross-cut, which has been driving to intersect the south part of the lode at the 120, has just reached it, and this is a very important point to watch. A good lode here would cause some excitement in shares again.

At West Crebor the lode 15 ft. deep is extremely promising, and may soon be in a course of ore.

At Prince of Wales the bottom of the mine is now drained, and the agent finds a good lode for 17 or 18 fathoms long in the bottom of the level. Owing to a choke he has not yet seen the 90 end east, which, before the water was in the mine, was valued at 15l. per fm. The Good Luck lode has been tested for tin in five places, and all produced tin. One place yielded 52 lbs., and another 37 lbs., of tin to a ton of stuff, and these two can be worked to a good profit. The lode is 3½ to 6 ft. wide, and easy to stop.

East Crebor is looking well. The lode in the 70 east is 2 ft. wide, producing arsenical stones of ore. The lode in the slopes in the bottom of the 60 west is worth 30l. per fathom. On the south lode the slope below the 60 fm. level is worth 10l. per fathom.

The Eureka (Nevada) is strongly recommended by Capt. Rickard, the manager of Richmond, and looks a good thing. Mr. Macfarlane, of Wheal Crebor, has joined the direction, and the shares are being well taken up.

The Lovell Mine, we understand, is looking better. The lode in the winze sinking below the 40 has increased to 9 ft. wide, and worth

25l. per fathom, and should it hold down, as it seems likely, the mine may be again in a dividend-paying state.

Since the above remarks on South Frances were in type the agent has written against the amalgamation with West Basset, and adds "should this unfortunate amalgamation take place I should consider the prospective value of South Frances considerably lessened, if not ruined." And it is said rather than see the amalgamation the agent would resign, "as such a scheme would only benefit smelters and merchants."

On the Stock Exchange business has been rather dull during the week, the delay in the session of Dulcigno and the prospect of further complications over the Greek question, naturally keeps buyers aloof and checks business. In the English railway market Brighton, A, stock still continues to fluctuate considerably, at one time dropping to nearly 150. The feature has been the rise in North British; Caledonian also are higher, the traffic returns of these two lines having been exceptionally good for the last few weeks. The other returns, though all showing increases, were in some cases rather disappointing—Great Easterns, 2900l.; London and North-Western, 1339l. North-Easterns still show large increases—over 13,000l. again this week. There has been a great deal of business doing in American railways, which have risen considerably, and will, we think, yet further improve; the receipts of most lines, as compared with those of last year, showing very large increases. Philadelphia and Reading shares, and Atlantic, Mississippi and Ohio bonds, have been especially buoyant, the latter having risen 9 or 10 per cent. The Grand Trunk of Canada traffic increase was 5087l., making an aggregate total of over 119,000l. Foreign stocks have been rather dull, though closing better, Spanish and Hungarians at one time showing an appreciable fall. Mexican railways preference shares, the purchase of which we strongly recommended some time since when they were much lower, have been rather depressed of late, on the rumour that the Government are going to discontinue the payment of the subsidy to the company. Should this be the case, and the shares in consequence drop, we think they ought then to be bought, as the stoppage of the subsidy will not materially affect the payment of the interest. The English funds are very firm, owing in a great measure to the present cheapness of money.

Friday afternoon, four o'clock:—We have just received the following telegram from the secretary, who is on the mine at D'Eresby Mountain:—"Another blast in lode (at No. 6) shows 18 in. of lead further; reports fully confirmed, success of mine assured, and immediate."

FOREIGN MINING AND METALLURGY.

The Belgian iron trade remains in much about the same state, and there is little hope at present of a revival in affairs. The Belgian mechanical construction establishments have plenty of work, and orders for iron are expected to be obtained from them, but it is doubtful whether these orders will be sufficient to restore animation to the markets. One of the most important Liège construction establishments is actively employed, and so actively indeed that it will have to turn out a locomotive weekly for at least a year to come. Pig maintains its price in Belgium, and the same may be said of iron, but this is partly due to the fact that prices are now so low that they cannot well go lower. English pig for refining is now delivered at Antwerp at 27. 3s. 3d. per ton, and casting pig at 27. 6s. 6d. per ton. The John Cockerill Company has obtained an order for 1200 tons of steel rails at Utrecht at 77. 5s. 6d. per ton.

The situation has not changed in the French iron trade. Transactions continue active, but prices have not revived. The Northern of France Railway Company has ordered 140 locomotives for use upon its lines. The same company has also let contracts to various French firms for no fewer than 5091 carriages and trucks.

As regards the French coal trade, it may be stated that cold and rainy weather, which has prevailed at Paris, has sensibly increased the demand for household quantities of coal. This state of things has imparted firmness to prices, and if the weather should become more wintery household coal delivered at Paris will not be obtainable below 27. 1s. 6d. to 27. 4s. per ton. The arrivals of coal at Paris maintain their importance, and fill up the gaps occasioned by sales. Trucks are becoming a little scarce, in consequence of the demand for them occasioned by beetroot traffic. The movement of coal from the Ruhr basin continues to be very active. During September the deliveries from the Ruhr basin amounted to no less than 227,000 tons.

Coal has remained firm in Belgium, and an advance is even beginning to be talked of. The deliveries have been considerable, and the demand is even becoming more decided from day to day. The first cold of the winter begins to make itself felt, and a current of orders has accordingly set in on winter account. In the Liège basin all the collieries are working to the full extent of their productive force, and a want of labour is felt in several directions. All coming coal for domestic purposes is quiet, but very firm. In the Charleroi district, as well as in the Borinage, prices are also firm, with a strong demand. This is what is usually observed at the commencement of winter. Prices have not changed at present in the Austrian coal trade, although the demand has become sensibly stronger.

THE WEEK.

SATURDAY, OCT. 16.—Those who neglected the previous evening to take advantage of the sudden slip in Brighton, A, and secure 153 or 153½, had to wait the chance to-day. The opening price was no better than 152½ to 153½, and the stock closed at 151½ to 152. North British advanced 1, to 89½, and Midland ¾, to 135½. A considerable advance took place in American securities. Erie advanced ¼, to 84½, and the Second Mortgage ¼, to 97. Illinois touched \$118, Pennsylvania 86½, and Readings \$18. South Wales Frances were bought on the report of the proposed amalgamation with West Basset.

MONDAY.—The Brighton traffic exhibited a falling off of 1900l. All attempts to steady the stock again failed. At one time a little buying was done at 153½, but the closing was 1 per cent. below this. Berwick continued to rise, finishing at 168½. South Wales Frances netted an advance of 2½, to 153½, and 15 to 16, and a considerable business was done in East Loval, Wheal Gwily, West Basset, and South Condor. Penrhall, Polrose, and Plunian are considered good speculations. Spanish were inclined to firmness. Some of the heavy operators would now be glad to get out at the present level, but the price shrinks at once when any heavy selling is attempted. To-day's advance amounted to ¼.

TUESDAY.—Decided firmness was apparent in Spanish. A change either way of ¼ is of considerable importance, but the fall to-day amounted to ¼, to 12¼. A panic was reported at Madrid and Barcelona. Mexican were neglected at 135½, and Perks at 10½. A marked desire is shown to secure an allotment of the new Midland Four per Cent. 10l. Preference shares, power to issue which to the extent of 2,250,000 was taken to-day. Every registered holder of 1000 shares is entitled to ten shares, and those who have a speculative account of stock can claim in the same ratio. It is worth noting that the option of converting such shares into ordinary stock (and so securing probably 5½ per cent.) is granted until August, 1881. The fact of "call money" being only 1½ per cent. for the closing yesterday is observable in Brighton, A. Usually this is 2½ per cent. for the closing. Brazilian Gold, 20s. to 25s. San Pedro, ¾, to ¾. Penrhall, 56½ to 57½. Parys Corporation, ¾, to 1. Devon Consols, 11 to 12. South Wales Frances, 14 to 15. Port Phillip, ¾, to ¾. Victoria, ¾, to ¾. South Indian Gold, 1½, to 1½. Wynnaid, 1½, to 1½. Almada, ¾, to ¾. Colorado, ¾, to ¾. East Wales, 2½, to 2½. Four o'clock.—Great Eastern have been down to 65½, but are now

WEDNESDAY.—Spanish being reported as steeper at Madrid the price here only gave way ¼, finishing 205½ to 207½. About this price it is not improbable that investors may buy largely. Home railways were out of favour, with the exception of North British, which continues to be much favoured by 151½, and operators, and finished ¾ higher, at 89. Brighton, A, receded ½, to 151½, and Dover, A, ¾, to 130½. East Caradon, 1½, to 1½. York Peninsula, ¾, to ¾. South Frances, 14 to 15.

THURSDAY.—The Crown Agents for the Cape of Good Hope received tenders amounting to nearly two millions for the half-million of 4 per cent. debentures they had to allot. The loan to the Trinidad Government turned out 15; the 150,000l. at the price of 98, as the bonds carry interest from Sept. 15; the price to the purchaser is about 95½. The Royal Mail Steam report allows of a dividend of 11.10s. per share, payable out of the "insurance account." It is admitted that the "fight" for freights and the war on the West Coast of Africa have acted prejudicially to the company.

FRIDAY (Opening).—The foreign market has rather a dull tendency. Spanish are ¼ down, and Turks ¼. Home railways have an undecided tone. Brighton, A, and Dover, A, are unchanged. Caledonian are ¼ lower, and British ½ higher, at 151½, to 152½. Turks, 10 to 10½. United, 64½ to 64½. North British, 89½ to 90½. Caledonian, 115½ to 115½. American shares continue steady. Erie are 84½, and Readings 81½. Trunk Ordinary, 20½ to 20½. First Preference, 92½ to 92½. Second, 81½ to 82. Third, 41½ to 42. Wheal Crebor are somewhat firmer, and quoted 4 to 4½, buyers offering 4½. East Crebor are offered at 25s., and quoted 1½ to 1½. A similar recovery is just being offered at 25s., and quoted 1½ to 1½. What took place yesterday is observable in Brighton, A. Usually this is 2½ per cent. for the closing. Brazilian Gold, 20s. to 25s. San Pedro, ¾, to ¾. Penrhall, 56½ to 57½. Parys Corporation, ¾, to 1. Devon Consols, 11 to 12. South Wales Frances, 14 to 15. Port Phillip, ¾, to ¾. Victoria, ¾, to ¾. South Indian Gold, 1½, to 1½. Wynnaid, 1½, to 1½. Almada, ¾, to ¾. Colorado, ¾, to ¾. East Wales, 2½, to 2½. Four o'clock.—Great Eastern have been down to 65½, but are now

North British have advanced to 92—a further rise of 12. A relapse to 84 1/2 is noticeable in Erie. Mexican Railway Ordinary, 7 1/2 to 7 3/4. First Preference, 21 1/2 to 22. Second, 13 1/2 to 14. Canadian Copper, 1 1/2 to 1 3/4. Illinois, 8 1/2 to 9 1/2. Pennsylvania, 8 1/2 to 9 1/4.

FOREIGN MINES.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, \$60,000, from 1030 tons of ore. Refinery, \$50,000.

R. Rickard, Sept. 20. The cross-cut from Lizette Tunnel has been drifted 11 ft. without any change to mention. The 200 north cross-cut from main west drift has been extended 27 ft. in favourable ground. The 500, north from No. 14 drift has been advanced 5 ft.; ground hard. The 600 west drift has been extended 27 ft. in soft ground. The 600 No. 2 north cross-cut has been extended 27 ft. in soft ground. The 600, north from No. 14 chute, has been advanced 15 ft. without any change. The 700, west from shaft, has been drifted 9 ft. 15 ft. in favourable ground. The 700, north-west from winze, has been extended without any change to mention. The 700, north-west from winze, has been extended 23 ft. on fissure has been advanced 13 ft. in very favourable ground for the 800, main west drift, has been extended 18 ft. in hard limestone. The 800, north cross-cut, has been drifted 14 ft. in favourable-looking ground. The 800, north-west from fissure, has been advanced 13 ft.; the fissure is regular, and the ground on either side looks very favourable for carrying ore. There is a decided improvement in the No. 14 chamber; the ore in the western portion of it is good, and promises to develop to a good size ore chamber to the west of the opening, and No. 15 is looking well, and turning out about the same quantity of ore. No. 13 chamber has also improved in the southern end. The furnaces are in good working order, and smelting large quantities of ore. The machinery both in mines and smelting works is in good working order.

BLUE TENT.—Telegram from T. Price, Oct. 18: Partial clean up, \$12,500. **ALMADA AND TIRRE CONSOLIDATED.**—Telegram from Mr. Clemes, dated Sept. 25: Our week's run, \$3804.

PLACERVILLE.—Telegram: 400 tons crushed; yield, \$2700; profit, \$300. Time lost in changing pipes preparatory to sinking.

KAPANGA.—James Thomas, Sept. 11: I am pleased to inform you that during the past four weeks the new powerful winding gear has been completed, the wire-rope put to work, and the mud sediment cleared from the 500 cross-cut. This work being done, on the 1st inst. I put nine men, three in a core, to clear up the bottom of the cave, and to square down the sides, put in bearers, and hang a bar of difficult working stone, being very angular and disjoined in places, which makes the progress slow for sinking. When we met this hard ground, in July, 1875, my report of that date says: "A very stiff bar of ground came in the shaft, the hardest and most crystalline rock, and the most difficult to sink we have yet met with, which caused the sinking this month to be slower than before." The same class of stone still remains in the bottom, and we are hoping the country consists of parallel belts of hard and soft stone. After formation through this belt I hope to set a contract for sinking 10 fms.; at present it would be injudicious to set a contract with the present appearances. The winding gear and wire-rope is a perfect success, and working splendidly, economising fuel and engine-power, besides the safety of the men working in the shaft. I may say we have now the most complete mining plant in this part of the world.

FLAVILLA.—R. Grundy, Oct. 5: Since I last wrote you the work in the west drift of the Brooks shaft has been pushed, and we have completed the enlargement of the drift, and laid a track so as to be able to run a small car there, and have drifted about 8 ft. We have taken out a little ore in drifting, but nothing of any importance. We purpose driving the drift on a little, and then raising up on the vein, as I believe the best of the ore is above; I like the appearance of the prospect very much. In the east branch from the main incline the work of cleaning and repairing is progressing at a very fair rate; we have got through the worst part of the cave, and can get to the face of the incline now. Although we have about 300 ft. of badly caved ground to clean out and secure yet, which will take, perhaps, a month to finish. In No. 1 incline we have drifted 18 ft. since we commenced, but have not found a settled formation yet. In the face now we have a quartz rock, which is very loose; if we can find a settled formation, which I think we shall soon, we can tell more about our prospects.

ISABELLE (Gold and Silver).—Extract of letter from Mr. Lewis Chalmers, dated Oct. 4th: I now send you report for the month, and progress, return and report for last week, both of which you will, I trust, find highly satisfactory. Pending the discussion about the Ponzie machine, I thought it might not be out of place to cable you what he had done during the month with our present rig; so on the 1st I wired you as follows:—"Ran 328 ft. last month." This was our run in 23 days, in very bad blasting through good drilling rock; last week 83 ft. On referring to the progress return you will find that during these 29 days we drilled, with two drills, 8450 ft. of 2 in. holes, and took out 2798 tons of ore. Our rock was not so tough as last week, and that our contract cut holes twice as fast as before. Preparing for winter, we have had a good deal of outside work to do, but we have nearly overtaken it.

Foreman's report for month of Sept.: I have the honour to present the following report for the month of Sept.: Progress during the month, 328 ft.; total distance from mouth, 3890 ft.; total distance from monument, 3962 ft. The formation has been quite favourable for making tunnel, being moderately soft for drilling, five hours having been the average time consumed in drilling the face with 18 lbs 8 in. deep; but the tough nature of the rock has caused an excessive consumption of powder, giving away only by repeated explosions with the use of the battery. The new blow engine has been placed in position in the building formerly occupied as a stable. The new stable is about completed, with accommodations for 10 mules, a grain room, and capacious hay loft. The new magazine is now being filled with a winter's supply of powder. A Cupola furnace (for making our own castings, such as car-wheels, extra parts for drills, &c.) is nearly completed. The tunnel buildings have all received a coat of metallic fire-proof paint, including the engine-house. A common and convenient timber shop has been completed, and occupied for the purpose of making the 12 in. air-pipe, &c., and our preparations for winter are nearly completed.

Foreman's weekly report ending Oct. 3rd: I have the honour to enclose progress report for the past week. Advance made 83 ft.; total distance from mouth, 3913 ft.; from monument, 3985 ft. There are no changes to note from last report. Machinery all in good order, and everything running smoothly.

CANADIAN (Copper and Sulphur).—F. Bennett, Sept. 25: Since reporting on Bolson Mine I have received the following information:—F. Bennett (Sept. 23) writes some very fine stone in the vein south of No. 1 shaft; the ore seems to be dipping south under the dark slate rock; it is the best looking point I have seen since we commenced. The above refers to a surface trial we are making on the veins. There is also a change in the vein at the 30, east of No. 5 shaft, at the Acon Mine; the vein rock now shows branches of calc spar, with spots of yellow copper ore in these branches.

Oct. 1: Bolton Mine. The driving in the 10, south of the north shaft, has been continued. The portion of the vein carried in this drift is about 6 ft., composed of calc spar, malachite, and copper ore, from which we can select from about 1 ton of copper ore, of 6 per cent, to 7 per cent, per fathom. We have also resumed cross-cutting the vein at this level eastward toward the eastern vein. The portion of the vein through which we are driving yields large rocks of malachite with copper ore mixed throughout in an appreciable quantity, closely approaching to the point that would enable us, from its value, to send to the smelting works, and encouraging us to expect ore in larger and more concentrated quantities on the hanging wall of this vein, as well as on the eastern vein when intersected. The surface operations have been delayed by the rain that has fallen during the past few days. The average width of the vein in the different stops continues to be about the same as it has been—from 4 to 5 ft. wide. The quantity of ores hauled, dressed, and delivered to the smelting works for the month of September from this mine is about 200 tons.

Oct. 1: Bolton Mine. I am glad to say there is an improvement in the cross-cut driving through the western vein at the 10, south of the north shaft. In this drift we have passed through a portion of the vein about 2 ft. wide, in which there is a larger quantity of copper ore associated with the malachite than has hitherto been seen in this part of the vein, and assaying probably 4 to 5 per cent, wet assay for copper. We have also resumed drifting in the 10, north of the shaft, on the same vein, and find good stones of yellow copper ore. Acon Mine: The vein in the 30, east of No. 5 shaft, is looking more promising, there being several branches of calc spar mixed with the limestone. At Williams' pit the black shale ore is not looking so well as it has been, and we are now making a trial of the limestone ore. St. Francis Mine: We have reached the collar of the shaft, and are now engaged in securing the adit level. There are but few men employed at this mine as yet, as we have not been able to obtain a suitable boiler to supply the steam to pump out the mine, and men are difficult to procure. Hartford Mine: The vein in the different stops maintains its size and character; the vein averages from 4 ft. to 4 ft. 6 in. wide, being almost solid iron pyrites, containing copper ores of about 4 per cent, for copper. The ore sent to the smelting works from this mine and the Acon Mine during the month of September (about 270 tons) have been sampled, and the assay will be sent you.

SESTEIN.—Oct. 15: The manager reports as follows: I am pleased to say our No. 4 level end has very much improved in value since I sent you the last report. I calculate it is now worth 3 tons of lead, mixed carbonate of lead, and galena, and a little blende per fathom for width of the level (ordinary size). We have broken during the past fortnight about 550 tons, and have brought to the floors about 62 tons of ore. We have had some rather heavy falls of snow lately, but it has not interfered with our work. The 100 tons of lead for Bristol has gone, and we are now forwarding 300 tons of blende for Swansea. We hope in a very short time to have another parcel of 100 tons of first-class lead and 300 tons of blende ready for market.

MISSOURI.—Advice received this week, dated Oct. 2, state that the following work has been done since last report:—At St. Clair Mine the 315, driving in the 10, in shaft 28 ft.; the lode is very promising, and for the past 15 ft. this level is in some 10 ft. further from all indications we shall cut into good ore ground that will average 2 tons to the fathom. The 315 ft. level, going south, has been driven 19 ft.; the lode is intersected by ore, and is increasing in strength and value. After the level has been driven some 3 fathoms further we shall under run the winze sunk 28 ft. south from the shaft in level 245, where the lode is worth for ore 2 1/2 tons per fathom. Judging from the strength of the ore deposits in the winze we should soon come into a rich run of mineral. In the 245 ft. level north 3 1/2 fathoms of ground has been stopped, yielding 2 1/2 tons to the fathom. The ground within the last week has improved, and we shall increase our force of miners at this point. The old engine shaft is run down to a depth of 125 ft., 40 ft. having been sunk since our last report of September 18. The boiler walls have been completed, the smoke stack raised, the engine set, and trestle for hoisting gear also set. As soon as water is reached we shall put in position our steam pump, and carry on the work under steam.

We have come to a portion of the old machinery that was thrown down the shaft, and have hoisted out part of same. Finding the machinery confirms the lode at the bottom, as it has been represented to be. We shall continue to push the work at this point as rapidly as possible. At Bald Hill the tunnel has been driven 20 ft. Indications continue favourable for cutting a good run of ore.

LYARES.—Oct. 13: The lode in the 130, driving east of Warne's engine-shaft, has fallen off in value during the past fortnight. The 115, driving in the same direction, is opening up a fine run of ore ground, worth 3 tons per fathom. In the 130, driving west of Warne's engine-shaft, the lode is very wide, but does

not contain any ore. The lode in the 135, driving west of Pell's engine-shaft, is improving, and produces 1 1/2 ton per fathom. In the 120, driving east of Pell's engine-shaft, the lode is compact and regular, and of a promising appearance, valued at 1 ton of ore per fathom. The lode in the 105, driving west of Pell's engine-shaft, is small, consisting chiefly of quartz, and yielding good stones of ore, worth 1/2 ton per fathom. In the 135, driving east of Pell's engine-shaft, there is a regular and well-defined lode, composed of carbonate of lime and lead ore, and producing 1 1/2 ton per fathom. The lode in the 120, driving east of Pell's engine-shaft, is hard and poor. No. 237 winze, sinking below the 120, is going down in a good shoot of ore, worth 2 tons per fathom. Quintos Mine: In the 100, driving East of Taylor's engine-shaft, the ground is very hard. The 90, driving in the same direction, is opening up a good length of productive ground, valued at 2 tons per fathom. The lode in the 80, driving east of western boundary, is small, containing a little ore, but not sufficient to value. In the 55, driving east of western boundary, the lode is improving in appearance. Good progress is being made in the sinking of Judd's shaft below the 65.

BUENA VENTURA.—Oct. 13: In the 50, driving west of Cox's engine-shaft, we have intersected the lode on the western side of the cross-course, which is of a promising appearance, and yielding good stones of ore. The 40, driving in the same direction, is opening up good stopping ground, at 1 1/2 ton per fathom. The lode in the 50, driving east of Cox's engine-shaft, is easy for driving through, the lode contains a little ore, but not sufficient to value. The lode in the 20, driving east of Taylor's engine-shaft, is small, consisting of carbonate of lime and lead ore, worth 1 ton per fathom. In the 20, driving west of Taylor's engine-shaft, there is a good stone of ore in the upper part of the end. No. 3 winze, sinking below the 10, is going down in a moderately productive lode, worth 1 ton of ore per fathom.

PUENA.—Oct. 12: Canada Inco's: In the 120, driving west of O'Shea's engine-shaft, the lode, worth 1/2 ton per fathom, is not so large as it was. The lode in the 50, driving west of O'Shea's shaft, is small and poor. In the 60, driving in the same direction, we have intersected the lode west of cross-course, but it is at present poor. The lode in the 70, driving west of San Pedro's shaft, contains good spots of ore, valued at 1/2 ton per fathom. In the 80, driving west of San Pedro's shaft, the lode is large and strong, producing 1/2 ton per fathom. The lode in the 90, driving west of San Pedro's shaft, is compact, and worth 1 ton per fathom, but does not contain so much lead as it did. In the same level driving east of San Pedro's shaft, the lode, worth 1/2 ton per fathom, is split into two parts. The 80, driving east of San Pedro's shaft, consists of a well-defined and compact lode, producing 1 ton of ore per fathom. In the 70, driving east of San Pedro's shaft, the men are taking down the south side of the level, where we expect to find the main part of the lode. The lode in the 120, driving east of O'Shea's engine-shaft, has improved of late, and valued at 1 1/2 ton per fathom. In the 100, driving east of Lowndes's shaft, the lode is divided, and not so rich as it was; it produces at present 1/2 ton per fathom. The lode in the 90, driving east of Caro's shaft, worth 1/2 ton per fathom, has fallen off in value within the last few days. The lode in Arista's winze sinking below the 30, retains its size, with good stones of ore, valued at 1/2 ton per fathom. In Lopez's winze, sinking below the 70, the lode is well-defined, and produces 1 ton of ore per fathom. Alfonso's winze, sinking below the 50, and worth 1/2 ton per fathom, is a new winze situated in advance of the 60 end west.

Los Salidos. In the 175, west of Taylor's engine-shaft, there is a large lode, but only producing 1/2 ton per fathom. The lode in the 160, driving west of Taylor's engine-shaft, has decreased in size and value during the past fortnight; its present worth is 1/2 ton per fathom. In the 175, driving east of Taylor's engine-shaft, the lode has improved to 1 ton of ore per fathom; the ground is favourable. The lode in the 160, driving east of Taylor's engine-shaft, and valued at 1/2 ton per fathom, is not so productive as it was, being very much smaller. No improvement has yet been met with in the 145, driving east of Taylor's engine-shaft. In the 130, driving in the same direction, a good length of rich ore ground is being opened up, worth 2 tons per fathom. In the 140, driving east of San Pablo shaft, the lode is producing 1 1/2 ton per fathom, but has very much diminished in size and value. In the 80, east of Palgrave's engine-shaft, we are driving on branches cut; they do not contain sufficient ore to value. In Manrique's winze, sinking below the 160 east, and worth 1 ton per fathom, a good improvement has taken place. The lode in Galera's winze, sinking below the 160 west, and producing 1/2 ton per fathom, has fallen off in value, and is letting out very much water. San Antonio: The lode in the 30, driving east of Henty's shaft, the lode is intersected nearer the shaft than in the level above, it is very open, and opening out a good length of ore ground, worth 2 tons per fathom. The 20, driving west of Henty's engine-shaft, is poor, and of no value. The masons have completed the walling of Henty's engine-shaft, which also has been divided and cased. The shaftmen will begin to sink for cistern and bearers and tip-plate at once. Rica's winze, sinking below the 30, is sufficiently deep for the 45; the lode is very promising, and produces 1 ton of ore per fathom.

ALAMILLOS.—Oct. 13: In the 130 cross-cut, driving south of Taylor's engine-shaft, the lode is intersected nearer the shaft than in the level above, it is very open, and contains good stones of lead, but its value is not yet known. The 115, driving west of Taylor's engine-shaft, became poor a few days ago, and there is no ore west of this in the level above. The 100, driving in the same direction, has communicated with Hidalgo's winze; the lode being poor, it is suspended. In the 85, driving west of San Adriano's shaft, the lode is small, but it contains a few spots of lead. There is a strong lode in the 60, driving east of San Victor shaft, but it does not contain lead enough to value. In the 70, driving east of San Victor shaft, there is more quartz in the lode, but it still retains its former value at 5 tons of ore per fathom. The 70, driving west of San Victor shaft, is opening a good length of stopping ground, worth 1/2 ton per fathom. Manuel's winze is being sunk below the 60, east of San Victor shaft, and produces 1/2 ton of ore per fathom. Sota's winze, sinking below the 50, and valued at 1/2 ton per fathom, is situated east of Cox's shaft.

VIÑEBERG COPPER.—R. K. Roskilly, Oct. 16: The 160 cross-cut is extended east of shaft 12, and the lode is intersected at a distance of 2 fathoms, and good progress is being made. In the last 3 metres driven we passed through a hard bar of ground, the appearance of which, as well as the several branches already met with, shows evidently the identical characters of the rock with that in the 140 previous to intersecting the lode; hence the main lode which proved so rich in the upper levels is still in advance of the present end, and this is being pushed on with all speed to make the intersection. In the 120, driving west of Taylor's engine-shaft, the lode is producing 1 1/2 ton per fathom, but has very much diminished in size and value. In the 80, east of Palgrave's engine-shaft, we are driving on branches cut; they do not contain sufficient ore to value. In Manrique's winze, sinking below the 160 east, and worth 1 ton per fathom, a good improvement has taken place. The lode in Galera's winze, sinking below the 160 west, and producing 1/2 ton per fathom, has fallen off in value, and is letting out very much water. San Antonio: The lode in the 30, driving east of Henty's shaft, the lode is intersected nearer the shaft than in the level above, it is very open, and opening out a good length of ore ground, worth 2 tons per fathom. The 20, driving west of Henty's engine-shaft, is poor, and of no value. The masons have completed the walling of Henty's engine-shaft, which also has been divided and cased. The shaftmen will begin to sink for cistern and bearers and tip-plate at once. Rica's winze, sinking below the 30, is sufficiently deep for the 45; the lode is very promising, and produces 1 ton of ore per fathom.

YORKE PENINSULA.—The directors have received advices from the committee of inspection at Adelaide, with reports from the Kurilla Mine to Sept. 6 last. The following are extracts from Captain Anthony's reports.—Kurilla Lode: The 67 is being driven out by six men, but it is not expected that ore will be met with for some time to come. The best shoot of ore on this lode should be cut 40 fms. from the shaft. You are already aware that at the 25 and 45 on the south part of the lode lying from 2 1/2 to 3 fms. off the north portion the prospects are fairly good, and that at the 15 a good shallow deposit of ore was found. At the 45 east a cross-cut is being driven from the north part to the drive on the south part. At the 35 the south part is also struck by a cross-cut. At the 25, as you are already aware, a good lode was found, but the work is not being prosecuted there for want of air. At 15 four men are driving east on what appears to be a good intermediate vein. It is intended to drive 2 fms. further east, and then drive south to drain the new shaft just within the boundary of section 398. Under better circumstances regards funds, we should be driving east on the south part of the lode at the 55, 45, 35, and 25 towards Gurner's shaft in section 398, about 70 fms. off, where the works are carried 20 fms. deep, and from which a large quantity of ore was raised by former workers. Six men are stopping the 55 at 3 ft. per fathom, and 28. 6d. in 12. For ore. Two men are stopping the 45 on the south part of the lode at 10s. in 12. Two men have for some months past been stopping the 35.

Morphett's Lode. As you are aware, the engine-shaft on this lode is sunk to the 43, but the lode is drained as deep as the 55, by the tunnel from the Kurilla lode, and ventilated by a winze from the 43, east of the engine-shaft. At the 55, west of the tunnel, six men have a contract of 30 fms., worth 4 tons of 15 per cent, ore per fathom. At the 55, east of the tunnel, six men have a contract to drive 30 fms., worth 4 tons of 18 per cent, ore per fathom. At the 43, four men are driving east. The lode is pinched by hard rock, not in usual position, but by a kind of porphyry or elvan, and is irregular in every way, worth 2 tons of 20 per cent, ore per fathom. At the 30, four men are driving east. Here also the lode is suffering under the same conditions, but there is a vein of good ore, worth 1 ton of 20 per cent, ore per fathom. At the 20, four men are driving east. Here also the lode was greatly disordered and enlarged by the same dyke as at the 43 and 30, and, as at the other drivages, we had to follow the ore by cross-cutting the lode. The yield is now 2 tons of 20 per cent, ore per fathom, and we are hopeful that the dyke of elvan is past, and that on going east better results may yet be obtained. At the 10 we have driving east, and we appear to be the north near the surface, they are by no means regular. At the 43, west of Morphett's, six men have a contract, at 15s. per fathom, to sink a winze to the 55. The lode is worth 5 tons of 16 per cent, ore per fathom.

To-day four men have begun to sink a winze below the 43, east of the said shaft; price not yet fixed, nor the value of the lode known. It will, however, go down in good ore ground, being directly under a stoppe there is being worked at 27. per fathom and 28. 6d. in 12. These men will lay open a long reach of good ore for stopping. A winze is also being sunk below the 10, on the south part of the lode, to hole to the 20; 24 four men are engaged stopping this lode on tribute and tutwork, making in all 62 men.—The North Branch, or New Lode, North of Morphett's: Two men are driving east at the 10, in section 398, at 3 ft. per fathom for 20 fms.; the lode is pretty regular, and good boxes of ore are met with from time to time. The number of hands employed in and about the mine is 156.—Ore Returns: 305 tons of hands dispatched from the mine for shipment to England, and there remained on hand on Sept. 6, 550 tons of 13 1/2 per cent, and 4450 tons of low-class ore of about 5 per cent.

[For remainder of Foreign Mines see this day's Supplement.]

A MAGNIFICENT NUGGET.—The Swazie gold fields seem to be an entire success. A nugget has been discovered there weighing 3 lbs. 9 ozs. Diggers are flocking to the fields from all parts.—*Natal Mercury.*

PENSION FOR LITERARY SERVICES.—Joseph Skipsey, a Northumberland miner, author of several lyric poems, and now residing at Rackworth Colliery, near Newcastle, has received an intimation from Mr. Gladstone's

private secretary that, in consideration of his literary services, the Queen has been pleased to award him an annual pension.

GREAT LAXEY MEETING.—ROCK BORING.—Mr. Peter Watson, the London director of the above company, calls attention to a printer's error in the report of the meeting published in last week's Journal, in which it is stated "10 ft.," instead of "10 fms.," and following this is put "1000/," whereas it should have been "12,000/." The part alluded to in this gentleman's speech is so important, as showing the great difference between hand labour and rock-boring machinery, that it is desirable that his remarks should be correctly given. He said: "Your chairman has called your attention to one fact in connection with the adoption of rock-drills in mining development, and he has rightly told you that I have had some experience in the matter. I have over and over again mentioned, not only to this company but to other companies also, the importance of getting as many of these drills as possible to work. I will just mention one matter, to show you the practical and economic value of these rock drills. By manual labour it is possible to drive at the rate of 1 1/2 fms. per month. That is at the rate of 18 fms. a year simple drivage. You can multiply it at any price you like; but supposing you take it at 20s. a fm., that makes 360s. a year. It is generally calculated that in every fathom driving you make 10 fms. reserve—viz., 5 fms. up and 5 down; so that you must multiply the 360s. by ten, thus giving 3600s. as the result of the year's working by manual labour in one level. Now, compare that with the rock-rill. With the rock-rill you can drive 5 fms. a month, as compared with the 1 1/2 fms. by hand labour. Multiply the 5 fms. by 12, and you have 60 fms. as the year's drivage, as compared with the 18 fms. by manual labour. Multiply the 60 fms. by the value, 20s. per fm., and you have 1200s. of ground opened, as against 360s. by manual labour; and if you multiply the 1200s. by 10 fms., you have 12,000s. as reserves of ore opened up, the result of the year's working by machinery, as compared with 3600s. by manual labour. These figures show you that by means of this machinery you can accomplish as much as three or four times the work that you can by manual labour; and they prove to you that the most effectual and practical way of developing your mine is by means of boring machinery, rather than by manual labour. We have spent about 2000s. during the past six months, and I feel confident that the shareholders will reap the benefit of this expenditure hereafter." And this opportunity may be taken of confirming all that Mr. Peter Watson has said concerning the practical application of rock-drills in our home mines. The produce of the ore is, in many cases, higher in English than in foreign mines, which are made to return equal profit; and there can be no doubt that, with machine-drilling, dynamite (which, as the patent will expire in a few months, will shortly be as cheap per pound as gunpowder), and cheaper fuel for motive power, British mines will again become more remunerative to shareholders than any of their foreign rivals.

METAL MARKET.—COPPER: This metal changed in value but little during September. The deliveries of raw material were good, and the stocks gradually decrease. The imports in the eight months are less by 2800 tons than in the corresponding period of 1879, but the exports are not in so favourable a position. The home trade was, however, well occupied, and so far as can be ascertained the unwieldy stock of copper that has been so long the source of depression in this market will by degrees be much reduced. The West Coast charters already show a falling off of 8000 tons in the nine months. The Australian supplies are not larger, and precipitates and other sorts together are less. An increased Indian demand is looked for consequent on the higher prices obtained for all description of Indian produce, and with a better home consumption for all sorts the statistical position of this metal can but improve.—**TIN:** Some very heavy sales of foreign tin were made towards the middle of September down to 78s. 10s., but this figure being so much below the price ruling in the States as well as Australia, a sharp reaction was the natural result, and before the close of the month a rise of 4s. to 5s., was established, and a very firm market has since been experienced. The deliveries during September were good, and subsequent to the Dutch sale of Banca on Sept. 29 a decidedly healthier tone prevailed.—**TIN-PLATES:** are not in such good demand as they have been, and prices have been run down almost as low as in the autumn of last year, 14s. 6s. having been accepted for second-hand parcels in Liverpool; a very slightly increased demand, would, however, no doubt soon alter this state of matters, and a rise of 2s. or 3s. be experienced in plates.—**SPELTER:** Prices in England are quoted from 20s. to 25s. below that at which this metal can be imported from the Continent with what object it is difficult to say, as there is a fair demand for the mixed metal trades, and the galvanizers have been exceedingly busy, but consumers assist the jobbers so much in their "bearing" operations in spelter by crying prices down that when a reaction sets in they pay very heavily for their want of confidence in the market. Stocks in Silesia have accumulated somewhat by reason of the action of the German and French Syndicate, but prices do not usually fall at this season of the year, and as the Syndicate price is 18s. 2s. 6d., out-ports, and they are doing still a very large trade in rolled zinc, it is difficult to believe that 16s. 15s. to 17s. (the ruling quotation) is a price at which holders would be willing to quit a large line of spelter.—**LEAD:** fell 15s. during September, the importers of Spanish being free sellers, and the export demand excepting for special brands having considerably decreased.—*From H. Rogers and Son's Circular.*

[The following Mine was received too late for insertion in its proper place.]

NANT PHYS.—W. Michell, Oct. 18: South Lode: Since striking the wall of the lode the level has been extended east on its course 3 fms. We find the lode takes a regular bearing into the mountain, and the part that has been taken out in driving is composed, for 2 ft. wide, of flocon and spar with sport of ore. There is a part of the lode standing in the side which can be proved, after driving a few fathoms, by a short cross-cut. I may add that we have a very promising piece of ground before us, and taking this into consideration with the favourable appearance and bearing of the lode, I shall not be surprised if we strike on a valuable deposit of ore at any time.—**Copper Lode:** After we had put in a deep open cutting we found the ground about the lode disordered, and had a large quantity of water to contend with; consequently we had to abandon it at this point, and are now engaged in opening up the lode eastward in higher, and of hope more solid ground; in fact, we can reasonably expect to find a branch of ore as well. The weather having been so very stormy of late, and the water bringing in the sides of the deep pits, we have been obliged to suspend the costening for the present, but as this work has been let by contract, evidently the men will push it at again as soon as it is safe to do so.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 12—	Central Foxdale	80	£12 13 0	Weston, Son, and Co.
13—	Pierrefitte	100	13 5	Nevill, Druce, and Co.
19—	Foxdale	100	10 0	Weston, Son, and Co.
21—	Roman Graves	150	10 2 6	Walker, Parker, and Co.
—	ditto	50	10 4 0	J. H. Moore.
—	Uni. Van and Glyn	50	8 12 6	Goodhart and Co.

Frongoch has sold 150 tons of Blende, and has sampled 100 tons of Lead, for sale next week.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 15—	Minera	100	£4 13 6	Dilwyn and Co.
—	ditto	98	4 14 6	Vivian and Sons.
—	ditto	54	4 5 0	Swansea Vale Company.
—	ditto	54	4 7 6	Dilwyn and Co.
—	ditto	54	4 7 6	ditto
—	ditto	50	4 6 6	Vivian and Sons.
—	ditto	30	3 18 6	ditto

COPPER ORES.

Sampled Oct. 6, and sold at the Royal Hotel, Truro, Oct. 21.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols.	102	£1 13 6	Wheal Crebor	85	£3 9 0
ditto	97	1 13 6	South Caradon	100	3 6 0
ditto	91	1 11 6	ditto	99	4 2 0
ditto	90	1 16 6	ditto	98	4 7 6
ditto	88	1 4 0	ditto	97	5 5 6
ditto	86	1 13 6	ditto	93	5 16 6
ditto	83	1 11 6	ditto	92	3 8 6
ditto	82	5 18 6	ditto	38	8 6 6
ditto	81	1 14 6	Marke Valley	73	3 12 6
ditto	67	5 1 6	ditto	47	1 16 6
ditto	6	21 4 0	ditto	45	1 19 6
Wheal Crebor	96	3 8 6	ditto	35	1 14 0
ditto	94	3 9 6	Glasgow Caradon	52	3 2 0
ditto	93	3 14 6	ditto	46	3 0 6
ditto	92	3 6 6	ditto	42	3 3 0
ditto	90	3 13 6	Gawton	30	4 6 6

TOTAL PRODUCE.

Devon Great Con.	873	.....	£2093	11	6	Marke Valley	.....	200	.....	£ 498	15
Wheal Crebor	550	.....	1968	11	6	Glasgow Caradon.	.....	140	.....	432	13
South Caradon	520	.....	2613	7	6	Gawton	.....	30	.....	129	15

BRITISH MINES.

BRITISH MINES.

level, in this level since the end was driven over where the sump is sunk under this level. I have now great hope of having a good lode soon. It is much of the same character as when we sunk on it three months since, and is looking much better now than it was on Tuesday last, when one of the shareholders went through the mine.

NORTH HERODSFOT.—T. Trelease, Oct. 21: Owing to a large increase of water progress in the shaft has been rather slow in the past week, and we are obliged to suspend operations in clearing the 50 north, and have put in drains in both north and south levels to prevent the water from coming into the shaft, and we hope now we shall not have much water to contend with in the future. I have put the 50 men about our necessary work in securing footing, &c. The masons are getting on with the office and store-room. Our engine, &c., continue to work very satisfactorily.

NORTH PENRITH.—Stephen Davey, W. Polkinghorne, Oct. 21: High-burner shaft: The lode in this shaft, sinking below the 108, is 3½ ft. wide, and producing good quality tin stuff; the shaftmen making fair progress with sinking. The lode in the 108, driving east, is 2 ft. wide, and worth, for tin, 6½ per fathom. The lode in this level, driving west of shaft, is 2 ft. wide, and producing a little tin for the stamps. The lode in the 88, driving west, is 5 ft. wide, and worth, for tin, 5½ per fathom. The lode on branch, driving east and west, and worth, for tin, 5½ per fathom. The lode in the 46, driving east, is 2 ft. wide, and producing a little tin for the stamps. The lode in the 46, driving east, is 2 ft. wide, and producing a little tin for the stamps. The lode in the 46, driving east, is 2 ft. wide, and producing a little tin for the stamps.

NORTH.—Thomas Tonkin, Oct. 21: The 42 Fm. Level: During the week the rise in the west section has produced some good saving work, and as the ground is easy we shall soon open out stopping ground of no mean order. The tributary ground in this section is looking well, and keeps up a yield of 1½ ton of lead ore; the ground is composed of flookan, fluor-spar, and calcite, with a strong mixture of lead ore for a width of about 4 ft. The tributary pitch in this section yields 15 cwt. of ore to the fathom.—The 15 Fm. Level: The cross-cut, west of Low shaft, presents no features of improvement since last reported on. The tributary ground in the west section is yielding 10 cwt. to the fathom in easy ground. The cross-cut for the side vein in this section is in hard spar, and appears as if near a change of ground; some solid pieces of ore are met with in the forebrest.—Adit Level: The tributary ground in this level yields 8 cwt. of ore to the fathom, and is unchanged in appearance.—Surface Operations: We are pushing forward the dressing as fast as possible, and the machinery is in good working order.

PANDORA.—H. Nottingham, Oct. 20: New Lode: The 45, going south, is still looking well; worth 35 cwt. of lead ore per fathom per width of level, and we are leaving good lead on the footwall of the lode. The north end is worth 25 tons to a fathom per width of lode. We have now opened 6 fms. in length on this course of ore, and both ends looking well. In the 33 we have holed both winzes; we have been sinking from the 23, and are now preparing to stop with some of these men, and the others will be placed to drive the 33 north. I have no other changes to report on the underground.—Surface: Our reservoirs are now low that we are obliged to pump with the engine. Dressing is now going on well, and we have put on the new sieve to the crusher, which delivers the stuff in fine sand, and saves us a good deal of labour on the floors. I shall sample 50 tons of ore next week, 30 of lead and 20 of blende.

PANT-Y-MWYN.—E. Parry, Oct. 14: We have a very nice lode in the 24, east of Modlyn; four men are driving at the rate of 9 ft. per week, and we are glad to say the lode in the 44 west is improving as we advance. We hope to go forward twice the distance in the last month; we have eight men driving this end, and every effort is being made to push on to the ore ground, which is plentifully dips faster between the 13 fathom level, east of Griffith's shaft, and Modlyn shaft than it does nearer to Griffith's shaft, but there is one thing encouraging us forward in this undertaking, and that is that the lode has been very rich as far as we followed it down below the 13 fms. level, east of Griffith's shaft, and it may be as well for me to remind you that when we do strike the ore ground we shall have 100 fathoms continuous of that ground, and judging from what has yielded between the 13 fms. level and the 24 fms. level, our 24 fms. level will lay open for stopping at least 1000 tons of lead ore, and most of it in speedy ground, and so can, therefore, be raised cheaply and it is the opinion of all the old miners as well as our own that our levels, or say this 24 fms. level, should be continued on into the Pensarn ground, where the lode has been worked all along the surface and down to the water level for half a mile in length in a time of wet. We get the water from this ground now, and find no difficulty to contend with it, so that there is no fear of the water; in fact, our Modlyn shaft has drained the water for a long way east and west of it, and we are pumping and winding at Modlyn and Griffiths, with 40 tons of ore per month. We are in good shape now, and are developing the mine as fast as possible, and shall have a rich mine in a short time. No particular change elsewhere in the mine.

PENHALLS.—S. Bennetts, R. Harris, Oct. 16: The lode in the rise above the 50 is 2 ft. wide, producing some low quality tin stuff. The 70 east end is at present unproductive. The 60 east is worth 7½ per fathom, the 55 east 6½, the 50 west 6½, and the 48 west 5½ per fathom.

PENYANT.—J. Kemp, Oct. 19: In preparing my report I thought it might interest our shareholders to know somewhat of the situation of the mine. It is three miles from St. Asaph, and seven from the noted mining town Holywell, it stands on the side of the vale of Clwyd, the scenery of which would repay anyone for a visit even if there were no Penant Mine to inspect, and that there is life in this mine I will endeavour to prove in the following statements, and at the same time point out our late and present proceedings. An adit level was driven up from the main road, and is 40 yards deep at the engine-shaft, through which the water flows, and we have erected machinery in a position to enable us to make use of the water in every process required for the dressing of the minerals. Our machinery comprises a Robey engine with crusher, winding apparatus with patent and other jigs, and flat buddles, the whole being so admirably arranged that we can dress upwards of 50 tons per month with three hands. The underground operations have mostly been confined to driving the 30 and 60 levels west, and stopping in the back of the same levels. The 80 is now being driven, and I am expecting daily to cut into a great body of mineral. I think there can be no doubt about this, as we went through the same lode in the 60, which is now in advance of the 80. The lode in the last-mentioned level underwent a great change last week; when driving we found some fine lumps of lead, and in one place left some fully 4 in. wide underfoot, which is a grand prospect for the 113, at which depth our engine-shaft stands, where an 113 level is started both east and west, so that when we have intersected the lode of ore before us in the 80 we shall only have to pump the water to enable us to resume the driving of the 113, which will give us a level to the 80, or a total of 93 yards. There can be no doubt that the bottom levels should be driven, because it is in depth we must expect to meet with large deposits of lead, and from the following changes that have taken place as depth is attained it is only natural that lead is the lowermost. From surface to the 40 the lode contained sulphate of barytes. From the 40 to the 80 carbonate, and noticing that lead is forming in the bottom of the 80 I came to the conclusion that large deposits will be found under the carbonate the mine is now producing. All the ores are in full work, producing quantities of carbonate containing some good lead. Knowing what we have before us, I advise that the 80 west be pushed on with all speed, and also recommend the following:—A cross-cut north about 60 yards east of shaft in the 80, which is now in operation. Drive the 60 east, which is in a very promising lode with a stream of water issuing from the forebrest. Continue the stopes so that we can send supplies to the market; this lode I have no doubt of the result. Seeing that all our dressing machinery is in place and in regular working order, with pumping-engine, capstan, smith and carpenter's shop, and all the rest of the machinery in good order, and that we are on the verge of realising our wishes, I do trust you will enable me to proceed with the points enumerated which, I feel certain will turn out successful.

POLROSE.—W. Bennetts, C. Roach, Oct. 20: The Margaret lode, in the 90 west, is still 3½ ft. wide, and of a promising character. We are here opening drift which will pay to work on tribute when the end is further advanced. In the ground continued, north from Polrose lode, the men are making good progress, and the ground continues of a very good character for mining to the 90. The cross-cut south, to intersect the Pollard lode, we have a most favourable channel of ground, and we hope to make speedy progress with the drive.

PRINCE OF WALES.—John Andrews, Oct. 21: The shaftmen have finished clearing away the stuff from the bottom of the shaft, and the bottom of the mine is now perfectly drained, and we have examined the 90, or bottom end west, which is 2 ft. wide, composed of quartz, capel, mundle, and copper ore—a very promising lode; and in the bottom of this level, west of shaft, we find a good lode for 15 or 18 fms. in length, but the value of which are not yet in a position to say. In consequence of a choke in the level, we have not yet been able to see the 90 end east, but the last value of this end before the water was let in. We understand 15½ per fathom. The shaftmen are now engaged cutting ground for bearers and clatern for the plunger-lift at the 77. We have tested the good Luck lode at five different places, all of which produce tin, one 52 lbs. profit, as the lode is 3½ ft. to 6 ft. wide, and speedy for stopping.

ROMAN GRAVELS.—Arthur Waters, Oct. 21: The lode in the 125, south of new engine-shaft, is 10 to 12 ft. wide, composed of nice-looking carbonate of lime, with a good mixture of soft lead ore against the footwall, and there is every prospect of an early improvement as we go forward. The 110, north of this shaft, is holed to the level driven south from flat-rod shaft, and we, therefore, have a section opened for over 100 fms. in this direction. The 110 south is up to a delay, which we shall prove to full width by the cross-cut west without a delay, and may look forward to good ore ground from the present end forward. The 95 south is worth 3 tons per fathom, and is on the eve of improvement. The 80 south is worth 3 tons per fathom, and is on the eve of improvement. The 65, south on hanging-wall portion, is worth 2 tons per fathom. The 65, north and south of No. 2 cross-cut on the footwall course, is worth respectively 3½ and 1 ton per fathom. The winze below the 65, on the middle level, is worth 1½ ton per fathom, with ore ground standing on both sides as we go down. The stopes generally are as for some time past. We have to-day sold 200 tons of lead ore for 2028½.

SOUTH CONDUCH.—Wm. Rich, Wm. Williams, H. King, Oct. 20: We have water in the bottom shaft which hinders the sinking below the 20, but the winze sinking below this level on the course of the south lode is quite dry; the lode in this winze has a kindly appearance, and yields good stones of tin. The 40 end, east of engine-shaft, is worth 12½ per fathom. The 50 east is worth 10 per fathom; the stopes in the back of this level is worth 15½ per fathom. The 60 east yields a little tin. We are making a trip flat at the 50. At plantation shaft preparatory to driving the 60 west on the course of the lode. The ground around the underground for driving in the 70 cross-cut south; this cross-cut will prove the ground under the boundary shaft. The 70 end east is worth 10½ per fathom. The 80 end east is worth 8½ per fathom. The 80 end west is worth 10½ per fathom. The 93 east is worth 10½ per fathom.

SOUTH DARREN.—H. James, Oct. 21: The shaft is down 11 fms. 6 in. below the 120. The lode is large, composed of nice spar and bluestone, intermixed with lead and copper ore. The 110 end west is worth 1½ ton of lead ore per fathom, and shows good indications for further improvement. The sinking of the winze in this level is progressing well. A stopes in the back is worth 7 cwt. of lead and 5 cwt. of copper ore per fathom. A stopes east of shaft is worth 1½ in. wide, composed of spar, intermixed a little with lead and copper ores.

The sinking of the winze in this level is satisfactory. We are sinking by the side of the lode to gain speed, but carrying a small portion which looks very well for lead and copper ores. No. 1 stopes in the back is worth 9 cwt. of lead per fathom; No. 2, 8 cwt.; No. 3, 10 cwt.; and No. 4, 10 cwt. per fathom. The tributary pitch are producing fair average orestuff. All the machinery is in good order, and working well.

SOUTH DEVON UNITED.—W. Hooper, Oct. 16: The 110 east is set to six men, stented the month, at 12½ per fathom; the lode is 5 ft. wide, and its value 10½ per fathom. The 100 end east is set to two men, at 6½. 100 per fathom; the lode is 4½ ft. wide, composed of capel, mundle, and rich copper ore, with a value fully of 25½ per fathom. This is a very fine looking lode, more settled, and the further east, speaks well for the eastern ground. No. 1 stopes, in back of this level, is set to four men, at 2½. 150 per fathom; the lode is 3 ft. wide, and its value 15½ per fathom. No. 2 ditto is set to four men, at 4½ per fathom; the lode is 3½ ft. wide, with a value of 24½ per fathom. The 90 end east is set to two men, at 7½ per fathom; the lode is 3 ft. wide, with a value of 10½ per fathom. No. 1 stopes, in back of this level, is set to four men, at 3½. 100 per fathom; the lode is 3 ft. wide, with a value of 18½ per fathom. No. 2 ditto is set to two men, at 3½ per fathom; the lode is 2½ ft. wide, with a value of 13½ per fathom. The 80 end east is set to four men, at 11½ per fathom; the lode is 6 ft. wide, with a value of 30½ per fathom; here have driven through a very fine lode for many fathoms in length.—Surface: On Thursday we put three new jiggers to work, and I am glad to say they are doing their work well. The carpenters are now engaged in erecting a shed over the picking, spalling, and cobbing floors. No time shall be lost in getting it completed.

SOUTH PENRITH.—S. Davey, Oct. 21: At Walton's engine-shaft the water is fed to the 20, and the lift dropped through the choke this morning, and in two or three days hope to clear the remainder of choke, when we shall at once commence cutting down the shaft, and make preparations for fixing a drawing-lift at this level. At the flat-rod shaft the plat for angle-bolt is getting near completion, and would have been finished by this time, but the men have been engaged about other work, assisting to drop lift, &c. We are pushing on the engineers as fast as possible to get ready the whim and capstan, which will greatly facilitate our dropping of pitwork, &c. Surface operations are going on building in the whin-boller, completed roof of boiler-house, and are now engaged in building the boiler-house, which will be completed as soon as possible.

SOUTH TOLCARNE.—Thomas Angove, James Knotwell, Oct. 20: We have nothing new to report from last week except in the No. 2 cross-cut, which is changing in character, letting out water, and the ground easier for driving. We infer from this that we are approaching the flat lode at this point.

SOUTH WHEAL CREBOR.—John Goldsworthy, Oct. 20: The ground in the engine-shaft, sinking below the 16, is a light blue clay-slate, highly charged with mineral. The 16, driving north-east on the caunter, shows indications of an important change being near. The 16, driving south-east, on the caunter, produces good saving work for copper ore. This end being within 5 or 6 fms. of the east and west lode, we anticipate, from the appearance of the caunter, a rich discovery on reaching the lode.

SOUTH WHEAL FRANCES.—A. T. James, Oct. 21: The lode in Pascoe's shaft, sinking below the 215, is worth 40½ per fathom for 12 ft. in length. The lode is worth 12½ per fathom. The same level east is producing low quality tin stuff. The 205 west is producing a little tin. The winze in the bottom of the 185 east and west lode is producing a little tin, but not enough to value. The 175 west is worth 10½ per fathom. The stopes are not looking quite so well as they were, but notwithstanding this we hope to sell the promised quantity of tin against the coming meeting.

TANKERVILLE.—A. Waters, Oct. 21: The lode in the 220 west looks like twinning up, present value being 10 to 12 cwt. per fathom. We have not reached the lode yet, but from the quantity of water coming from the forebrest I think we must be near it. The two stopes in back of this level are together worth 1½ ton per fathom. The lode in the 220 east is 4 ft. wide, and worth about ½ ton per fathom. The end is getting very wet, and looks as if we are going to have a change for the better shortly. The three stopes in back of this level are together worth 3½ tons per fathom. The two stopes in bottom of the 205 east are together worth 2½ tons per fathom. The cross-cut, in the 220—about 10 fms. from shaft—going south from main lode, looks like being near the south lode. We shall see more of this by next report. The 182, going south (on north and south lode), parallel with the shale, is not looking so well as when reported on last week. The ore-course in the roof of the level is worth quite 1 ton per fathom, and I expect that an improvement will take place shortly as we go forward here. The tributary department is yielding ore in the usual quantities.

TEMPLE.—Oct. 20: During the past week better progress has been made with the boring machinery in the cross-cut, 15 ft. having been driven, making the entire length of the level from the Temple lode 22 fathoms. The lode in the back of the Champion lode, has been cut into about 5 ft., but the north wall has not yet been reached. It is composed, as far as seen, of quartz and carbonate of lime, with a few spots of copper, but no lead as yet been found in it. Other works progressing as last reported.

TREVINE CONSELS.—Joseph Prisk, Oct. 14: In conformity with your request I inspected this mine on the 12th inst., and beg to hand you the following report:—No. 1 Lode: The shaft is sunk about 10 fms. from surface in a lode of mundle, prlan, and gossan, and is a beautiful decomposed clay; the kilias being over the lode is in my opinion the desirable element for large productions of copper ore in this rich mining district.—No. 2 Lode: About 5 fms. further south there is a lode from 3 to 4 ft. wide, similar in character, and the composition of which is precisely the same as the lode referred to above. In examining the cross-cut above I find several branches all underlying north, which I think is the south lode. This is in fact the lode in the 110, and is a shaft sunk about 5 fms. from surface, where there is a large lode about 6 ft. wide, underlying south, composed of gossan, prlan, &c. About 4 fms. north of the above there is another lode about 3 ft. wide underlying north, with two well defined walls, composed of prlan and gossan, interspersed with grey copper ore. No. 3 shaft is sunk about 5 fms. from surface, where I was informed there is a lode that can be taken away at a low tribute as soon as the water is in fork.—No. 4 Shaft: The engine-shaft, which is sunk about 15 fms. where there is a cross-cut driven north 4 fms., and out a lode from 4 to 5 ft. wide, producing, I was informed, 2 tons of copper ore per fathom. The ore—mundle, blende, &c.—from this lode can be seen at the surface. It is of such a character altogether that such ore is rarely to be seen so near the surface.—General Remarks: In taking a review of the mine, looking at the geological position, which cannot be surpassed in the country, being east of Treasvan and Penrith Mines, parallel with the Consolidated group of mines that gave such promise to the shareholders, and being about 60 fms. south of the Wheal Moor, Wheal Todd, and Sunny Corner, which are a part of the Consolidated group, where thousands on thousands of tons of copper and tin ores were raised only a few fathoms deeper than this mine is now. The lodes in the mine being in the same stratum, and the general marked improvements in the lodes as depth is attained from gossan and prlan to mundle, blende, and copper, shows in my opinion that this is a most valuable property, only requiring a little deeper sinking to develop it, which no doubt will result in opening up a rich mine, and which the fortunate proprietors have reason to be congratulated upon.

—John Mayne, Sept. 21: Nos. 1 and 2 lodes are without any material alteration to remark since last week. In extending our operations about 40 fms. north we have sunk shaft 4 fms., and have cut a lode fully 4 ft. wide, with no north wall, composed of gossan, prlan, with rocks of mundle and copper, with the latter predominating considerably. Such a strong masterly lode I have never before seen in this locality at the depth, thereby confirming my oft expressed opinion that we are justifying our operations in this property, which I believe will result in highly remunerative results to the shareholders, and which I am much pleased in being able to report on. This important discovery is in addition to other discoveries that have already been made.

TYN-Y-FRON.—E. Jones, Oct. 20: During last week we have been working in the eastern part of the mine. We have cleared part of the underhand stopes west of the winze, in the bottom of which we find a leader of blende, worth from 2 to 2½ tons per fathom, with a strong mixture of lead, worth about 8 to 8 cwt. per fathom, and if we could drive the winze the ground under this stopes I am sure it would pay well for blende alone. We are now clearing the underhand stopes east of winze, which I expect will be as valuable as any part yet opened in the mine, upon which I shall be able to report fully next week.

VAUGHAN.—Thomas Garland, Oct. 20: In the cross-cut north at the deep level, west of engine-shaft, the ground is easier for exploring, being composed of blue clay-slate and branches of carbonate of lime, yielding occasionally stones of lead ore. In the stopes under the 30 fms. level the part of lode carried is 6 ft. wide, much fallen off in yield of ore, at present producing 10 cwt. per fathom. In the stopes under the 20 the part of lode carried is 5 ft. wide, yielding ore in places of an average yield of from 8 to 10 cwt. per fathom. The machinery is in good order, and surface work progressing regularly.

WEST CARADON.—N. Richards, Oct. 13: The lode in the winze sinking below the 27, on Gilpin's, is composed of quartz and fluor-spar, mixed with yellow copper ore—a very kindly looking lode; this is, as before stated, an important point, no level having been driven under it. This lode in the back of the adit level will yield from 1½ ton of copper ore per fathom. The cross-cut driving north of Gilpin's lode, at the 17, is without change to notice. The lode on the north part of Menadue will yield 1 ton of copper ore per fathom. Vivian's lode, in the 38, west of Hallett's cross-course, will yield about 2 tons of copper ore per fathom; the same lode in the adit level will yield over 2 tons of copper ore per fathom.

WEST CARADON.—N. Richards, Oct. 21: Gilpin's lode in the winze sinking below the 27, maintains its size—over 2½ ft. wide—from which we are breaking some good stones of ore. This lode in the back of the adit level will yield 1 to 1½ ton of copper ore per fathom. The cross-cut driving north of Gilpin's lode, at the 17, is without change to notice. I put a pair of men to rise on a branch in the back of the 50, on Vivian's north lode, which is considerably improved, and will now yield 1½ ton of copper ore per fathom. This lode in the 38, west of Hallett's cross-course, will yield about 1½ ton of copper ore per fathom. The same lode in the adit west of cross-course will yield 2 tons of copper ore per fathom. We have several other places we could work, but it is not convenient to do so just now.

WEST CREBOR.—John Andrews, Oct. 21: The engine-shaft is now down about 15 ft. below the surface, the lode in which is 3 ft. wide, composed of quartz, mundle, and gossan, with yellow and black copper ore intermixed; in fact, a more promising lode can hardly be seen so near the surface, and as we are now pushing on the sinking by nine men an improvement in the lode may be reasonably looked for any day.

WEST KITTY.—W. Vivian, Oct. 21: In the 72, driving east, the lode is 4 ft. wide, and worth 15½ per fathom for tin. In a stopes in the bottom of the 72 the lode is worth 7½ per fathom for tin. In the rise in the back of the 72 the lode is worth 10½ per fathom. In the 72, driving east, the lode is improving in appearance, and producing a little tin. The mine still continues to look well, opening up quite to my expectation, but I am sorry to say the weather is again dry. We have but little water for our stamps. We now have stamping power enough to deal with a much larger quantity of tinstuff than we are raising at present, as soon as the water sets in to give us a full supply.

WEST LISBURN.—N. Bray, Oct. 20: I have got some hands clearing the adit level to commence with, as you will have noticed, I have advertised in the Journal for steam-engine, and this and yesterday's posts have brought me several letters and circulars, which I am carefully looking over, and as one of the directors intimates his intention of visiting the mine shortly, I shall then

be better prepared to discuss the matter with him, and to come to some decision.

WEST VOR.—S. Harris, Oct. 21: The adit level, driving east of cross-cut, on the Great Vor lode, has been driven during the last week 2 ft.; the lode towards the bottom of the level is 4 ft. wide, from which I broke some good stones of tinstuff; it is highly mineralised throughout, and contains all the elements for a very productive tin lode. I still advise continuing the adit level, by which I have no doubt we shall make some good discovery.

WEST WHEAL PEEVOR.—W. T. White, James Pryor, Oct. 20: The following bargains were set on Saturday last:—The shaftmen again sunk 3 fms. in the engine-shaft during the last four weeks, and will, we believe, complete the lift this week to the 55 (or 16 fms. level in Wheal Peavor). We shall commence to cross-cut to the lode next week. Winze to sink in the bottom of the 45, at 6½ per fathom; this winze is opening up stopping ground, and the lode is getting more settled and productive as we go down. The 45 to drive west at 5½ per fms. lode producing low quality work. The 35 to drive west at 4½ per fathom; lode 2 ft. wide, opening up tribute ground. Stopes in bottom of this level at 2½. 100 per fathom; producing fair quality work. We hope, weather permitting, to complete the building of the engine-house in a fortnight's time. Our prospects are daily improving, and we hope soon to be raising large quantities of good tinstuff.

WEST WHEAL TOLGUS.—Oct. 21: The lode in the 155, driving west of Talgus shaft, is 5 ft. wide, and still yielding ½ ton of copper ore per fathom. The lode in the 145, west of shaft, is 4 ft. wide, yielding 1½ ton of ore per fathom. The lode in the 135, west of shaft, is 2 ft. wide, and yielding stones of copper ore.—Richards' Shaft: The lode in the 105, driving west of shaft, is 2½ ft. wide, yielding stones of mundle and copper ore, and has a kindly appearance. The lode in the 95, west of shaft, is 2 ft. wide, and yielding some saving work for copper ore. The lode in No. 3 rise, in the back of this level, is 2 ft. wide, and will yield 2 tons of ore per fathom. The lode in the 35, west of shaft, is 3 ft. wide, yielding some very good stones of ore, but the ground is very wet and troublesome for driving. There is nothing new to report on in the 65 cross-cut driving south. The stopes are producing about their usual quantities of copper ore. We sampled, computed, 251 tons of copper ore on Tuesday last.

WHEAL COATES UNITED.—W. H. Martin, Oct. 6: The pumping-engine was started on March 1st last, since which time I have carried out and completed the following surface work:—No. 1 pumping engine: Built a bob-stair, erected a boiler for the engine, fixed new hot-water tube in the mine, changing-house. Built a new engine-house, boiler-house, and high stack for the winding-engine, erected the engine, winding-cage, and a long run of high stands to the landing brace. Repaired the stamps, fixed new tram-road from the landing brace to the stamps passes. Built and fixed six new buddles on the dressing floors with all new appliances, added new portion to the dressing floors, and partly repaired the skip-road. During the carrying out of the above work the following underground work has been done:—Drain the mine from the 30 to bottom or 30 fms. level, fixed new plunger-lift at the 30 with pitch, pine-logs and other requisites to the pitwork, fixed ladder-roads in the shafts and winzes, put in a new skip-road from the 70 to the 80, repaired the skip-road below adit, cut a large tip-plat at the 70, partly cut plat at the 80, sunk winze east of shaft from the 50 to the 70, sunk winze from the 70 to the 80, west of shaft. In a fortnight we hope to communicate the 50 west winze with the 70 west rise, making 20 fms. In carrying out the above work the time has been very well spent, and I believe 3000 per month, over and above the sales of tin, will bring the mine into a dividend state. I have not included any cost for sinking the shaft, or covering in the dressing floors; the latter will, however, be protected during the winter months by the erection of boarding on the sides facing the sea. It should be remembered that the engine-shaft has been sunk to the 80 fms. level, or 106 fms. from surface, and that the levels have only been extended from shaft a short distance; and my object is to open up the ground by extending the levels in what I have proved to be paying ground, and wish to draw your attention to the fact that since the starting of the mine nearly all kinds of materials and labour have considerably advanced, and during the twelve months the mine was idle the wood machinery on the surface and dressing floors so much decayed that it has cost double the amount to repair which was first anticipated. To the east of the engine-shaft, below the 50, a section of tin ground, about 150 fms., is laid open ready for stopping; value varying from 5½ to 10½ per fathom. As some of this ground is of low quality tinstuff, it will yield much more profit to take it away at the present price of tin. However, I am glad to report the 70 east end has lately much improved; this end is extended several fathoms beyond any level driven east. West of engine-shaft, towards the end of this month, a large section of good ground, about 900 fms., will be opened up for stopping, value about 10½ per fathom; and at the end of six months after the drive of the levels as recommended above, a further section will be opened up, and, judging from the present prospects, of a higher value.

WHEAL CREBOR.—George Rowe, H. Phillips, October 19: We have passed through several small branches containing good quality copper ore in the 120 cross-cut driving south, and from the present appearance of the ground we are inclined to think the south part of the lode is not far off. The lode in the 120, west of cross-cut, is producing arsenical mundle, with occasional stones of ore. The lode in the stopes in the back of the 120, east of winze, is worth 40½ per fms. The lode in the stopes in the back of the same level, west of the adit winze, is worth 40½ per fms. The lode in the 118 east is showing a very kindly appearance, with mundle and spots of ore, and the ground improved for progress. The south part of the lode in the rise in the back of the 103 fms. level is worth 70½ per fathom. The lode in the stopes in the back of the 103, west of rise, is worth 50½ per fathom. The lode in the stopes in the back of the same level, east of said rise, is worth 80½ per fathom. No. 2 stopes, east of rise, is worth 50½ per fathom. The new shaftmen are engaged in putting in penthouse and cutting ground to bring the machine kilble to the 72.

WHEAL CREBOR.—George Rowe, Oct. 21: We have cut the south wall of the south lode in the 130 cross-cut south, with spots of mundle and ore, but not sufficient to say what the lode will be when cut into. I will advise you on its particulars and value as soon as we get into the centre part.

WHEAL GRENVILLE.—T. Hodge, Oct. 21: We are making our usual speed in sinking Gould's shaft; it is now down nearly 11 fms. below the 178. The 178 east end produces stamping work. In the 178 west end there is a very good bunch of tin in the bottom; upwards the lode is not so productive, it is worth about 9½ per fathom—a very kindly lode indeed. The 165 east end is looking very well, worth 15½ per fathom. The 150 east end is worth 14½ per fathom. The rise in back of the said level is worth 14½ per fathom. The 140 east end is worth 18½ per fathom; this end is about 6 fms. behind the rise referred to above. The mine has considerably improved during the past week.

WHEAL PEEVOR.—W. T. White, T. C. King, Oct. 20: We have no particular change to report in connection with the mine; all bargains much the same as last reported, and we are continuing our usual quantity of tin. It is our duty to set a day on Saturday next, and next week a setting report will be sent out giving valuations, &c.

WHEAL PRUSSIA.—Joseph Pryor, Oct. 20: I am pleased to say the lode in the 30, east of skip-shaft, still continues to look very promising; we have cut through it, and put the men to drive east on same; the lode is fully 4 ft. wide, and worth 8½ per fathom, with every indication of an early improvement. We cannot speak of any change in any of the other points of operation, they being just the same as last reported. All the surface work is being pushed forward with all speed. We intend hoisting the shears to-morrow.

From Mr. JOHN B. REYNOLDS: The markets this week have been characterised by quietude, giving investors who are coming forward an opportunity of calmly making their calculations. Rails have fluctuated rather in favour of buyers, and considerable comment has been indulged in relative to the new issue of Midland stock. Practically those who take the new 107 shares buy the ordinary Midland stock at 115 per cent. for delivery in 1887, and get 3½ per cent. for their payments in the meantime, taking into account the premium of 1½ which the new stock commands. This is a capital investment for those who are content with small interest and perfect safety. North Staffordshire ordinary also secures a favourable comment, and the business of the company is looking up. This stock is also good to buy, and rails generally are vastly superior to many securities which get more attention. No one I think will deny the comparative insecurity of foreign loans, and it appears to me they are none the more secure because of the action of Her Majesty's Government. The market for mining shares has not been unlike the tone of that for other securities. We must here, however, mention one or two prominent exceptions. South Frances and West Basset have had more than their share of notice. It is true that the movement in these shares is premature; it is based on the amalgamation scheme. The reaction in South Frances set in last Tuesday, but the buyers of West Basset have been more determined and stronger men. North Basset shares have fallen only it is stated, to rise again to a higher level than before. Respecting the immediate future of these, however, it is not possible to express an opinion worth having. The "bears" and the "bulls" are at it. The bona fide shareholders may look on with complacency as to the ultimate issue. The shares are too low and the mine too valuable to justify any anxiety on the part of the investor at this moment. The question is, who cares about the company? The shares have changed hands at 1s. each. Surely a little puffing, or anything to explain the reason why should be welcome. But Wheal Kitty shares were at 6d. once, so there is hope for Killifreth; and by way of giving those interested a further crumb of comfort let me say that buyers will not sell at quotations, and those who have had the mine inspected affirm that the shares are worth double present prices. The New Kitty shareholders are spirited, and it is believed that their prospects are very good. The engine-house will be rapidly erected, and the sooner the better—so say all. Wheal Sisters, Lelant, are mines which really ought to have a little said about them. Could not our friends in the Redruth Mining Exchange look beyond their little circle of favourites?

HOLLOWAY'S PILLS.—PREVISION.—As autumn treads on winter slender, delicate, and pale-faced youths become listless, languid, and debilitated, unless an alterative, combined with some tonic, be administered to quicken their enfeebled organs. This precise requirement is supplied in these noted pills, which can and will accomplish all that is wanted, provided the printed instructions surrounding them meet with scrupulous attention. Holloway's pills are especially adapted to supply the medical wants of youth, because his medicine acts gently, though surely, as a purifier, regulator, alterative, tonic, and mild aperient. A very few doses of these pills will convince any discouraged invalid that his cure lies in his own hands, and a little perseverance only is demanded for its completion.

manager of South Frances, remarks that—"Should this unfortunate amalgamation take place, I should consider the prospective value of South Frances considerably lessened, if not ruined," whilst the partisans of West Basset state that at that mine (West Basset) they have good shafts, good stamping power, and that the mine generally well laid out, whilst at South Frances they have crooked shafts and other great disadvantages; it being added, moreover, that the market price of South Frances is but 65,250*l.* (4500 shares at 14*l.* 10*s.*), and that of West Basset 99,000*l.* (6500 shares at 15*l.* 10*s.*). The conclusion drawn being that West Basset "is selling for nearly 33 per cent. more money than South Frances," which is absurdly erroneous, since even 97,875*l.* is 50 per cent. more than 65,250*l.* The writer's object is evidently to give a fictitious value to West Basset. There are, however, other figures which might be given. South Frances upon an outlay of 34,275*l.* has returned 183,487*l.* in dividends to the shareholders; West Basset upon an outlay of 42,000*l.* has returned but 161,000*l.* If there is to be an amalgamation (which will probably only be possible by first discharging the agents in both mines, and appointing new committees) it should be the whole of the agents in both mines, and appointing new committees) it should be prospective. The mines should be worked as at present for twelve months, and the capital in the new concern should then be distributed to the shareholders according to the dividends paid during that time. The present combined capital is 76,375*l.*, so that a new concern with 100,000*l.* nominal capital, in 12 shares, could readily effect the arrangement mentioned by determining to have any unappropriated shares to form a reserve fund.

Richmond, 15*l.* to 15*l.*; the usual telegram from the mines at Eureka Nevada states that the week's run was 560,000, from 1030 tons of ore. During the week the refinery produced 550,000. The manager (Sept. 29) reports that the 900 north-west on fissure has been advanced 13 ft.; the fissure is regular, and the ground on either side looks very favourable for carrying ore. There is a decided improvement in No. 14 chamber; the ore in the western portion of it is opening, and promises to develop to a good size ore chamber to the west part of the old chamber. No. 15 is looking well, and turning out about the same quantity of ore. No. 13 chamber has also improved in the southern end. The furnaces are in good working order, and smelting large quantities of ore. The machinery both in the mine and smelting works is in good working order.

Ruby and Dunderberg, 5*l.* to 6*l.*; the usual weekly report is considered favourable, and the telegram is confirmatory. The output for last week is reported to show an increase upon the previous week, and it is considered that it may be expected to be augmented as the driving in the ore body progresses. The first-class ore is being recovered in accordance with the recommendations of the manager, and in anticipation of starting the furnace by Nov. 1, by which time the output is expected to be sufficient to run one furnace at least. It is understood that Mr. Dowling has visited the mines, and reports favourably upon the miner-like way in which the work has been carried out, both above and below ground.

An announcement, which is no doubt intended to form the basis for a new American gold swindle, has just been made in the Alta Californian. It is said that a man named Tichenor, of Tichenor and Dudley, who recently bought the Calistoga Hot Springs Hotel, has for two weeks been extracting gold from the water by a process known only to himself and a few other persons. From ten barrels he obtained 2150*l.* It is remarked that the gold is the highest grade of fineness, and as the springs in the locality are very numerous, and the volume of water exceedingly large, it would be useless to attempt to estimate their value if they continue to yield as well as the experiments have proved thus far. Tichenor says that the dirt adjacent to the springs in the tract known as the hot water field will pay 50*l.* to the ton. The owners will erect suitable works within the next week for carrying on operations on a more extensive scale. That the said Tichenor, assuming the report to be correct, is either a rogue or a fool is beyond question, and whichever designation belongs to him it is desirable that capitalists especially English capitalists, should be cautioned against believing any such absurdities, a solution of gold in water of the character of the Chicken-soup being well known to be a chemical impossibility. If the statement be merely to attract visitors to the hotel, it may be passed by as a merely senseless trade hoax, but under any other circumstances speedy steps should be taken to secure prosecution for fraud, although it might only protect capitalists who are really almost too stupid to deserve protection. The story, however, is worth repeating. It is said that this Tichenor with his family took rooms at the Rydings Hotel, and after remaining a short time, quietly made proposals to the managers for the purchase of the Springs property. A sale was made, and Mr. Tichenor was the purchaser at 5000*l.* It soon began to be noised about that he was the man who had discovered and patented the process to extract gold from water. He had analysed the water of the spring known as the Chicken-soup Spring, and found a large per cent. of gold to the gallon of water, and since purchasing has put up his apparatus, and in the presence of many citizens he extracted from a five and a-half gallon pail of water 214 35*l.* in gold.

Devon Great Consols, 11*l.* to 12*l.*, and have been in increased demand all the week, and no doubt this is owing to the fact that the mines are looking much better at the Wheal Emma portion, as well as at the other parts, where further important discoveries of copper ores and mounds are shortly expected. As was stated a week ago the 873 tons of copper ore (for the month's sale) was likely to bring almost as much as the previous month's sale of 1000 tons. The sale on Thursday last of the 873 tons realised nearly 2100*l.*, whereas the previous month the 1000 tons realised only 2000*l.* It should be observed that the price of arsenic is also advancing.

Devon Great United, 1*l.* to 2*l.*, and have been in active demand, and appear scarce on the market. Active operations are being carried on in fixing the pitwork in Watson's engine-shaft so as to get the water out as early as possible and commence operations on the well-known rich Devon Great Consols Maria lodes, from which emanated the large dividends in that mine, and shares rose from 1*l.* per share to 800*l.* per share.

East Caradon, 1*l.* to 1*l.*; the meeting at Salisbury to-day passed off very satisfactorily. There was a debit balance of 300*l.*, and a call of 2*l.* 6*d.* per share was made. The condition of the mine is reported to be altogether more favourable—granite is showing itself at the 130 fm. level.

At West Phoenix Mine meeting, on Monday, the accounts showed a credit balance, after discharging all liabilities to Sept. 4, of 1947*l.* 7*s.* 7*d.*, which was carried to credit of next account. The reports of Capt. John Holman and Richard Gluyas are considered favourable. They have already 23 men employed.

Monia, 15*l.* to 16*l.*; the mine continues to open out well. In one part of the new workings the bluestone is apparently giving way to copper of rich quality. More furnaces have lately been started to deal with the increased returns, and another parcel of regulus is nearly ready for sale.

Kapanga gold, 3*l.* to 4*l.*; the mail in yesterday brings news down to the 11th ult. At that date steady work in the sinking of the shaft was progressing, and the agent expects to work continuously now until the lode is reached. He adds—"We have the finest property and best plant in Australasia without a doubt, if the shaft is down to the lode."

La Plata Mining and Smelting Company of Leadville, Colorado, has just declared its fourteenth consecutive monthly dividend of 815,000 (70 cents per \$10 share) out of the September net profit of 815,226.40. This will be payable on Nov. 1, and will leave \$50,906 to credit of reserve fund. The official announcement will be found in another column.

In Gold Washing Companies' shares there have been very few transactions. Blue Tent, 2*l.* to 2*l.*. A telegram during the week announces a further partial clean up, with a return of 812,500. Plasterville, 2*l.* to 2*l.*. The shaft is steadily sinking below the 500 ft. level.

In Lead Mines there has been decidedly more doing, and there is much improvement in the general feature with regard to the future. Perhaps the most important feature of the week in this connection is the announcement telegraphed to-day that the great lode at D'Eresby Mountain has been partially cut through, and shows 23 ft. of lead. It is described as one of the finest lead lodes to be seen in the kingdom.

With Consols, 2*l.* to 3*l.*; it is said that a discovery of much importance is reported in the 50, splendid rocks of lead of fine appearance having been blasted out.

West Lishore, 1*l.* to 1*l.*; it is reported that the preparatory work of securing the shafts and unwatering the mine, together with the necessary surface work, is being vigorously proceeded with.

Pateley Bridge, 1*l.* to 1*l.*; the mine has much improved of late, more ore being raised, and if the No. 4 vein is cut good, as anticipated, in the 30, a large section of valuable ground will be laid open for stopping.

Widening, 4*l.* to 4*l.*; to-day another parcel of 150 tons of blende has been sold, the 29th inst. besides which 100 tons of lead were sampled for sale on the 29th inst. The last news from the mine is considered extremely satisfactory, continues to improve, and prospects are excellent in all departments. Caron, 1*l.* to 2*l.*; there has been a very satisfactory change for the better in the 22, and further improvement is expected. Red Rock, 1*l.* to 2*l.*; the latest accounts are of a very cheering character, and prospects are considered very good.

[The closing quotations being given in the Share List on the last page of the Journal it is unnecessary to repeat them here.]

INSURANCE SHARES have, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance Marine, 25*l.*; Atlas, 17*l.*; Commercial Union, 21*l.* to 21*l.*; Marine, 4*l.*; London, 32*l.*; Imperial Fire, 14*l.* to 14*l.*; London and Provincial, 14*l.* to 14*l.*; Royal Exchange, 20*l.* to 20*l.*; Marine, 91 to 91*l.*; Merchants, 1*l.* to 1*l.*; Ocean, 1*l.* to 1*l.*; Little doing. Marine Insurance shares firm, others unchanged.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, has been in Bahia, 16*l.*; Brentford, 15*l.*; Continental Union, 21*l.* to 21*l.*;

Commercial, 19; European, 19*l.* to 20*l.*; ditto new, 14*l.* to 14*l.*; British, 35*l.*; Gaslight, A, 180*l.* to 185*l.*; ditto C 10 per cent., 220; ditto H 7 per cent., 137 to 138*l.*; ditto 4 per cent. debentures, 103*l.*; London, 180 to 182; Imperial Continental, 192 to 195*l.*; Monte Video, 16*l.*; Para, 6*l.*; Oriental new, 5*l.* to 5*l.*; Rio de Janeiro, 25*l.*; South Metropolitan, B, 185 to 187. Gas stocks firm. For closing prices see list on last page of Journal.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

At Truro Ticketing, on Thursday, 2313 tons of ore of 6*l.* average produce, and containing 150 tons 13 cwt. of fine copper, were sold for 7736*l.* 14*s.*, being 3*l.* 7*s.* per ton of ore; 10*s.* 3*d.* per unit, or 51*l.* 8*s.* per ton of fine copper in the ore, and an average standard of 93*l.* 11*s.* Subjoined are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Oct. 7, 1880	1088	84	1	0	8 <i>l.</i> 12	6 <i>l.</i> 10
Oct. 21, 1880	2313	93	11	0	6 <i>l.</i> 10	3

Compared with the last sale the advance has been in the standard 15*s.*, and in the price per ton of ore about 1*s.*

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Oct. 16).—Alum: Loose Lump, 6*l.* 7*s.* 6*d.*; Lump, 6*l.* 12*s.* 6*d.*; ground, 7*l.* 5*s.*—Arsenic: Best white powdered, 11*l.* 10*s.*—Bleaching Powder, 5*l.* 12*s.* 6*d.*—Borax: Refined English, 60*l.*—Coppers: Green, 45*s.*—Copper: Sulphate, 21*l.* 0*s.*—Nitrate of Lead, 29*l.*—Nitrate of Soda: 14*s.* 0*d.*—Potash: 10*l.* 10*s.*—Soda: Cream Castile, 9*l.* 0*s.*—Sulphate of Zinc, 12*l.*—Sulphur: Roll, 9*l.*; flour, 12*l.*—Tin Crystals, 6*l.* 0*s.* per lb.—White lead, 21*l.* 0*s.*—Brimstone: Best thirds, 6*l.* 5*s.*—China-Clay, 39*s.*—Ochre, 5*l.* 15*s.*—Oxide of Zinc, 25*l.* 10*s.*—Talc, 5*l.*—Umber, 45*s.*—Copper: Best ingot, 65*l.*; seconds ingot, 64*l.*—Lead: Best soft English, 15*l.*; Pig-Iron, No. 4 Forge, 38*s.*—Spelter, 17*l.* 15*s.*—Tin: British common block, 90*l.*; Naphtha Miscible, 5*s.*

It is notified that no applications for shares in the Indian Phoenix Gold Mining Company (Limited) will be received after Monday next.

At the Stock and Share Auction Company's sale on Wednesday the following were among the prices obtained:—Belfast Street Tramways Company 10*l.* shares, 5*l.* 10*s.* to 5*l.* 15*s.*; Firmin and Sons 20*l.* shares, 17*l.* 10*s.*; Grosvenor Hotel Company 10*l.* ordinary shares, 4*l.* 10*s.*; City of London Co-operative Association, 1*l.* shares, 10*s.*; Llynvi and Tondur Company 20*l.* ordinary shares, 6*l.*; Lancashire Cotton Spinning Company 5*l.* shares, 4*l.* 10*s.*, paid 2*l.*; Edgcombe Manganese Company 1*l.* shares, 10*s.* 6*d.*; Colombo Commercial Company 10*l.* shares (4*l.* paid), 4*l.*; F. Brady and Company 10*l.* shares, 9*l.* 7*s.* 6*d.*; Lady Bertha Copper and Tin Mines 1*l.* shares, 19*s.* 6*d.*; and other miscellaneous shares fetched fair prices.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Lead Trade; Colliery Explosions, and Safety-Lamps; the late Descuberto Mines, now the Brazilian Gold Mines (Limited); Practical Mines versus Pretenders; Practical and Theoretical Mining (J. Lean); Russian Coal Fields—No. VI.; Emma Silver Mining Company; Connolly Company—Ruby and Dunderberg (H. P. deaux); Connolly, and Ruby and Dunderberg (J. H. Tilly); Ruby and Dunderberg, and Connolly (B. S. Bernard); Anglo-American Mining (J. J. West); Mining in Brazil; the Nouveau Monde Mining Company; Gold Quartz, and its Treatment (H. J. Moritz); Simple Problem; Mining in Algeria—No. IV.; Gold Mining in the Dutch West Indies; the West Mostyn Coal and Iron Mining Company; Comparisons (J. B. Reynolds); Mining in Shropshire—Old Snailbesch; East Wheel Rose (J. Phillips); Roches Rocks; Roches Tin Mine, St. Austell; Illogan, and its Mines (R. Symons); Tincroft Mining Company; the Devon Copper and Blende Company; Revival of Mining in the Tavistock District; Great Laxey Mining Company. Reports from Cornwall, North and South Staffordshire, and North Wales, Salop, and Cardigan. Trade of the Tyne and Wear. Reports from Derbyshire and Yorkshire, and the Forest of Dean—Lay Hall Colliery Company—Lectures on Practical Mining in Germany—No. CLXIV.—Foreign Mines—Registration of New Companies—Meetings of West Chiverton, East Chiverton, Drakewalls, and West Prussian Companies, &c.

THE EMMA.—With regard to the Emma Mine the following telegram from New York has been received announcing the departure of an agent of the American vendors with powers to settle all matters in dispute, with a view to a restoration of the mine to the shareholders, free from claims of debenture-holders and claims in America. He is expected to arrive on Oct. 30 by the Bothnia steamer.

PANDORA.—The 45 south is worth 1*l.* 12*s.* ton of lead ore per fathom, with more lead standing on the footwall, and the 45 north is worth 2*l.* 4*s.* ton of lead ore per fathom; 6 fms. have already been opened here on this course of ore, and the ends of both levels continue good. There will be 30 tons of lead, and 20 tons of blende, sold for the month. With an improvement in business and in the price of lead, the shares of this mine must command a considerably higher market value.

EAST ROMAN GRAVELS.—On Monday, driving to the lode at the 109 fm. level will be commenced. The 86 end is worth 1 ton, the two stops in this level together 4*l.* 10*s.*, and the pitches together 6*l.* 10*s.* of lead ore per fathom, making a total of 12*l.* 10*s.* per fathom.

TREVINE CONSOLS.—We are much pleased to observe the prospects of this mine still continue to improve, the lodes already discovered are of such a highly mineralised character that it seems almost a certainty a course of copper ore must be met with at a few fathoms further sinking. We know of no other mine with such results at the depth. Capt. Joseph Prisk, of North Wheel Busy, has this week inspected, and his report appears in to-day's Journal. In his concluding remarks he says:—"Taking a review of the mine, looking at its geological position, which cannot be surpassed, being surrounded by the most celebrated mines in the county, from which thousands upon thousands of tons of copper and tin ores were raised only a few fathoms deeper than this mine, and the lodes being in the same stratum shows, in my opinion, that this is a most valuable property, only requiring a little further sinking to open up a rich mine." It appears the mine has been inspected by Capt. Maynard, of East Pool; Capt. White, of Wheal Pevor; Capt. Rich, of South Condurrow, and others whose opinions fully bear out the above remarks.

D'ERESBY MOUNTAIN.—The great lode at D'Eresby Mountain has been partially cut through 23 ft. in lead; it is one of the first lead lodes to be seen in the kingdom.

CARN CAMBORNE.—The operations at this mine are being vigorously prosecuted. It will be seen by the report of Captain R. Southey and W. C. Vivian, in another column, that they have experienced great difficulty in draining the old workings below the 85 fm. level. The sinking of the shaft will now be resumed; and there is no doubt in the minds of those mining engineers who are acquainted with Carn Camborne that it will become, like its neighbours, a rich dividend mine. There is no district in the world so rich for tin and copper as that around Carn Camborne, which is bounded on the north by Dolcoath and on the south by South Condurrow. Should the expectations of the agents prove correct, and valuable discoveries be met with on deeper development, Carn Camborne will be one more mining prize added to the number that have already rewarded those who have had the courage to embark their capital in this locality.

MYNYDD-GORDDU (Lead).—There are many inquiries about this mine, the recent completion of the extensive reservoir (a description of which appears in another column) seems to have given a new start, and as the mine is developing uncommonly well, and even with five months interruption for want of water (not now likely to again occur), has produced nearly 3000*l.* worth of ore during the last twelve months, everything seems to confirm the impression so generally entertained that it would be one of the Cardiganshire prizes. They sample another 20 tons of lead and 40 tons of blende on the 30th. Not a bad month's work from what are as yet comparatively shallow workings.

THE KINGSTON MINING COMPANY (Limited).—We are glad to learn that this mine is to be again started. Considering the shallow depth at which the ore has been taken away 8000*l.* worth is a very large quantity to have been obtained already. According to the assays it is remarkably rich in silver. The reports of Mr. Thomas Sopwith and of practical miners are very favourable, while the fact that Mr. Walter Eddy has, after inspecting the mine, agreed to act as a director and invest his money in it, is the very best evidence of what he thinks of it, and is a guarantee that it will turn out a successful enterprise.

BEDFORD UNITED.—Operations on the Bridge lode are being pushed on vigorously, and as the floor of spar met with in the shaft is passed through, and the lode is much improved a further change for the better is daily expected. Other parts of the mine are looking well, and the prospects generally are most cheering.

SCOTTISH AUSTRALIAN MINING COMPANY.—The report recommends a dividend at the rate of 15 per cent. per annum for the half-year, leaving 8441*l.* to be carried forward, after adding 5000*l.* to reserve, increasing that fund to 20,000*l.*

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Notices to Correspondents.

* * Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

NICKEL—"E. and Co." (Glasgow).—There is, practically speaking, no nickel ore at present produced in Great Britain, but the Duke of Argyll has some on a Scotch estate belonging to him, which could, no doubt, be turned to account if there were a market at a fair price, and his lordship would probably offer facilities to responsible parties inclined to work it. The metal is extracted from many British ores, but such ores are purchased by Birmingham houses by private treaty, and the sellers are frequently unaware that it is the nickel which makes the ore attractive to the buyer. Vöel Hradug, in Pinstshire, which sold 116½ tons of cobaltiferous ore for £331, 2s. 5d. in 1879, is the only mine mentioned by Mr. Hunt under the head of Nickel and Cobalt, and this contained rather over 2 per cent. of cobalt and ¾ per cent. of nickel, which is much under the assay of some of the Devon and Cornish ore. The best market for the purchase of nickel ore proper, such as Garnierite, &c., would be Paris, most of such ores coming from New Caledonia, and being consigned to a banking house in Paris.

FIBRE MACHINES.—Can any reader of the *Mining Journal* give the names of the principal manufacturers of Mexican fibre machines such as are now in use in Yucatan, Mexico, for converting the century plant, agave, &c., into Mexican fibre?—J. E. H.: *Georgetown, California.*

Received.—"J. E." (Oldham). The letter has been forwarded, as requested.—"W. N."—"J. S. F."—"C. G."—"R. H." (Wales). Apply to Messrs. Lockwood, of Stationers' Hall Court, London; or any local bookseller will procure the work.—"P. A."—"J. C. V." (Paris).—"F. W. N." (Natal).—"C. J. H."—"E. R." (History of Tin Mining in Bohemia and Saxony).—"F. G. S."—"Shareholder" (Wheat Crebber).—"M. K. and R." (New York). Tables showing the Values of Silver and Gold—George Daly (Leadville, Colorado). The Brittenstene Silver Mining Company—"W. R."—"K. E." (East Caradon).—"Reader"—"A.A.M." should consult a sharebroker—"J. C." The papers have been sent, as requested.—"R. D. A." (Sydney). Next week—"A Shareholder" (Flagstaff).—"G. H." (Forest Gate).—"P." We shall be glad to hear—"S. N. D."—"Bourbonnais" (Canada). Next week—"Gold not Gilt," on Practical Information for Miners, shall appear in next week's Journal.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, OCTOBER 23, 1880.

EMPLOYERS' LIABILITY.

On Jan. 1 next will come into force the Act passed last session to render employers liable to compensate their workpeople for personal injuries sustained by them in the course of their employment. The effect will be to impose a distinct money tax upon the already sorely tried and heavily burdened industries of this country. What will be the amount of this tax? and how can it be best met? are questions which call for immediate and careful consideration.

What is likely to be the amount of this tax as it affects mining? The Act provides that where a workperson suffers personal injury he, or in case of death his personal representatives, may bring an action to recover compensation if such injury or death is caused—

1.—By a defect in the plant or machinery of his employer; provided such defect arose from or had not been discovered or remedied owing to the negligence of the employer or the person he may have deputed to see that the plant is kept in proper condition; but if the workman knew of the defect or negligence and failed to notify the employer or his deputy he has no remedy.

2.—By the negligence of the person having superintendence entrusted to him by the employer; and this superintendence is defined as a person whose sole or principal duty is superintendence, and who is not ordinarily engaged in manual labour—that is, in the case of coal mines, managers, foremen, underwriters, deputies, and firemen; but here, too, if the workman injured knew of the negligence and failed to give notice he has no remedy.

3.—By the negligence of a person in the service of the employer, to whose orders the workman was bound to conform, and did conform, when the injury resulted from his having so conformed. But here, again, if the workman knew of the negligence and failed to give notice he has no remedy. Probably, too, it would be necessary in this case to prove agency in order to render the employer liable.

4.—By the act done or omission made of any person in the service of the employer in obedience to the rules established by the employer, or in obedience to particular instructions given by any person delegated with the employer's authority in that behalf, if the injury resulted from some impropriety or defect in the rules or instructions. But in the case of mines the special rules approved by the Secretary of State cannot be deemed improper or defective; and in the case of "particular instructions" these must be shown to be improper or defective to enable a workman to recover; and if the workman knew they were defective and failed to give notice he has no remedy.

It will thus be seen that the increased liabilities of employers, although modified by the qualifying clauses, are likely to be serious, and that it is impossible in the present state of our knowledge to say exactly what they are likely to amount to. The amount in each individual case is limited to three years earnings of a person in the like employment in the same district, but we have no means of estimating for what proportion of the accidents occurring an employer could be made liable under the Act, having regard to the limitations by which his liability is regulated.

How are these liabilities to be provided for in the case of mines? It has been suggested that employers might contract themselves out of the Act; that they might refuse to employ any person except under a special contract that the employer should not be liable to compensate the workman for any injury sustained by him in his employment. But in case of death would not the personal representative of the workman still have the right to recover? And if the Act were attempted to be thus systematically evaded, how long would it be before Parliament would interfere to prevent such contracts?

Another suggestion is to form an employers' defence fund, and fight every claim made under this Act, no matter whether justly or not. Surely this would be a most unwise course to take. Are not the relations of capital and labour already sufficiently strained? Can it be the true interests of the employers to set themselves in open antagonism to their workmen and to defy public opinion?

There are several insurance companies who insure against accidental injury or death, and it has naturally enough been mooted that possibly these companies might see their way to extend their operations so as to enable employers to insure themselves with them against the claims of their workpeople under this Act. But the employers are not called upon to insure their workpeople absolutely either against injury or death; they only require to insure themselves against such accidental injury or death as they are rendered liable for under this Act. There are no data from which to estimate the probable

amount of the liability, and without knowing something of the risk how can you estimate the premium? The whole question is involved in such uncertainty that it is difficult to see how any existing insurance company under its present powers could undertake this liability. In the Northern coal field, in West Lancashire, North Wales, and one or two other districts, Miners' Relief Societies have been established, which are supported and managed principally by the workmen themselves, and to the funds of which the employers contribute a certain percentage varying from 10 to 20 per cent. of the subscriptions by the workmen. These provide relief for the accidentally injured members, and support the widows and orphans left by any members who may be killed. It was said during the discussions on the Bill that the effect of the Act passing would probably be to injure or destroy these societies, as employers would refuse to continue their subscriptions if they were to be held liable to compensate their workpeople under the Act. But these Societies provide for all accidents, and probably for a large proportion for which the employer could not be held liable under the Act. Those who have experience of these societies, and have seen the large amount of quiet unobtrusive good done by them, would esteem it a terrible misfortune if they should be crippled in their usefulness, and I cannot think that any employer would willingly withdraw or lessen his contributions to their funds. It has been suggested that these societies, where they exist, might be made available to meet the employers' liability by raising the percentage they pay to (say) 25 or 30 per cent. of the men's subscriptions, to make them, in fact, mutual insurance societies of men and masters. But suppose that this could be done by agreement between the employers, the relief societies, and the representatives of the workmen, in what way could such arrangement be rendered permanent and binding? In the present state of trade, no doubt, if the masters were firm they could make it a condition of employment that every workperson should join the relief society, and also contract himself out of the Act. But this could only bind the workman for his usual period of employment, mostly only a fortnight. By giving a fortnight's notice he could at any time get out of his engagement; and if the times so improved as that the workman should again be master of the situation, no doubt he would quickly free himself from what he would look upon as a forced alienation of his privileges. What would then be the position of the employer? Worse than before. And what would then be the position of the relief societies? And again, how could this arrangement be made to bind each and every employer? Even now in the same district there are cases where some employers refuse to pay more than 10 per cent. to the relief societies funds, while others are paying 15, the latter being the rate agreed to at a representative meeting of the employers themselves.

There is yet another method of enabling the employers to meet the liabilities likely to fall upon them, that is by mutually assuring each other against damages and costs under this Act, in the same manner that shipowners mutually assure against marine risks. The cases are very similar in that the risks are unknown, and consequently no premium can be fixed. The employers might form an association, each one as it were underwriting himself for a certain value in proportion to the magnitude of his works. A committee of management might be formed in each district. Every claim brought under this Act would be carefully enquired into by this committee, aided by the best legal advice, and if well founded settled without law proceedings, and every improper claim could be resisted in the Courts. The expenditure could be met by calls at intervals as required, and no more money would be called than was absolutely needed to meet the liabilities. It should be remembered that this Act, objectionable as it is from an employers' standpoint, is not the act of the workmen or their delegates, but the deliberate will of the nation expressed through its representatives in Parliament; and now it is the law it is the duty of the employers to try loyally to carry it out, and to meet the burden imposed in a manly and generous spirit.

THE PENT-UP GAS IN MINES.

So far the enquiry into the explosion at the Seaham Colliery has not resulted in affording any data whatever as to its probable cause. Our mining engineers, or some of them at least who have studied the gases in our mines, suggest that it might have resulted from one of those sudden outbursts which at times take place without the slightest warning, enveloping workings of great extent in an explosive mixture. In one instance, there was a sudden rush of gas from the floor, and in a few minutes the whole return, about a mile from the bottom of the pit, was fouled from end to end. In the working of coal the pressure of gas underneath forces up the floor, and as more coal was taken away it escaped with tremendous force at the weakest point, which was next the face. No doubt, in many of our coal mines in different parts of England there are similar accumulations of gas under their feet, and when the pressure is taken off it is liberated. The floor at one colliery where the gas forced its way at not less than 11 in. in depth was rent, and it required not less than 30 lbs. per square inch force to do it. Comparing that thickness of 11 in. with 35 ft. thickness of hard stone which overlay the softer measures charged with gas, it suggests an almost unlimited force under the strata so long as there was no continuous vent. From experiments made, the pressure was found to vary from 135 lbs. per square inch down to 80 lbs., the highest pressure having been found to be always suddenly followed by the lowest pressure. It is evident, therefore, that when at the highest the gas has been blown off or has got vent in some way, and then gone down to the lowest pressure. As to the actual cause of the gas then suddenly forcing itself out, no really reliable data has been given, but some of those who have paid considerable attention to the matter have come to certain conclusions that appear to be well grounded. One mining engineer, of great experience, informs us that it is just possible that, as regards the floor, it may in some parts have been slightly rent, and then discharged a little gas; but nothing of the sort has ever been seen in a colliery where there had been several outbursts through two sides of the goaf—that is, the working faces and the side which was open to the return air course had always been watched and examined. It was, however, more probable that when the gas had got to the greatest pressure the floor had been sprung or lifted over a certain space, making room for the gas to expand to a less density and force for the time till the continuous discharge of more gas in time brings it up to its former power and pressure, as registered on the gauge. Though the pressure is great, there is no knowing how much greater it may become, for the extreme possible tension of gas as it is evolved from strata in the coal measures was not as yet exactly known.

The experiments we have alluded to prove with certainty that in districts with a floor such as we have described, and which gives off gas in the ordinary course of working, there was a force underneath which was equal to 135 lbs. per square inch above the weight of the atmosphere; and without some tapping or release of such a dangerous power, either by slips in the hard floor, or by bore-holes, or by other means, the mine was, as it were, on the top of a heavily-pressed boiler; and as the coal was worked the resisting power of the strata was reduced till an outburst took place. Mr. F. HURD carried out some experiments which lasted upwards of four years, he tells us, which consisted of cement 2½ in. in thickness and 4 square feet of surface being acted upon. The result showed that during the period named the exposure of the ordinary gas coal upon the 4 square feet of surface ended in the upheaving of solid cement to the extent of 2½ in.; when it had upheaved to that extent it shattered to pieces. Cement was used because it was considered the most suitable. These upheavals have not been unknown in the North of England, although but little has been heard of them, for at one colliery, some years ago, it was not an uncommon thing for the gas to burst from the floor and upheave many corfs of stone, and they have had to pipe the gas away from the blowers, the outbursts having lasted for weeks and sometimes for months. Some persons favoured the idea that the gas came from the decomposition of carbonaceous matter. Still they found gas that was originally in the coal had escaped from it and entered into cavities in the strata, where it remained at an enormous pressure; and so soon as that pressure was removed the gas came away. It was found in distinct bags, which was shown by boring, when gas was let off in some instances, and in others there was no gas at all. That these outbursts have resulted in some of the most

serious explosions that have taken place is considered as more than probable by many of our ablest mining engineers. As to their actual cause, the general conclusion is, although not accurately settled, that the gas existed at a certain pressure under certain strata, and was confined there so long as the pressure of that strata was greater than the pressure of the gas. The matter is a most important and interesting one, and it is to be hoped will receive more attention than it has hitherto done on the part of our mining engineers.

OUR COAL ABROAD.

Our coal exports appear to be continually extending. In September this year, for instance, we exported 1,688,606 tons, as compared with 1,529,287 tons in September, 1879, and 1,314,599 tons in September, 1878. Similarly the shipments of coal in September for the use of steamers engaged in foreign trade amounted to 469,710 tons, as compared with 414,218 tons in September, 1879, and 352,813 tons in September, 1878. If we extend the comparison to the first nine months of the last three years the results are still more decided and striking. Including shipments for the use of steamers engaged in foreign trade, we find that our aggregate coal exports to September 30 this year amounted to 17,643,362 tons, as compared with 15,532,598 tons in the corresponding period of 1879, and 14,922,837 tons in the corresponding period of 1878. Comparing this year with 1879, we find that an increase of rather more than 2,000,000 tons has been already established in the exports in 1880; and by the time that the year has fully run its course, the advance for the twelve months will be found to be not far short of 2,500,000 tons. This strikes us as a very important and interesting fact. The external consumption of our coal bids fair to attain an aggregate this year of 23,000,000 tons, and should the increase in the exports continue at its present rate for another decade, we shall be sending abroad 48,000,000 tons per annum by 1890.

We have heard from time to time of efforts made by France and Germany to render themselves independent of English coal supplies; but hitherto those efforts have been utter failures. Thus 25 years since we used to send the French about 1,000,000 tons of our coal annually; this year the corresponding total appears likely to be carried to at least 3,500,000 tons. At any rate, our coal exports to France to September 30 this year attained an actual aggregate of 2,716,462 tons, as compared with 2,423,155 tons in the corresponding period of 1879, and 2,276,990 tons in the corresponding period of 1878. The increase appears to have been almost continuous month by month, although it was of no great importance in September. If we turn to Germany we also find a marked increase in the German consumption of our coal this year. Our coal shipments to Germany in the first nine months of 1878 amounted to 1,434,209 tons, while they rose in the first nine months of 1879 to 1,504,565 tons, and in the first nine months of 1880 to 1,724,007 tons. Considering the great amount of coal existing in France and Germany—considering also the very respectable energy with which coal is worked in Germany, although the French still do not take very kindly to coal mining—we can but regard the continued increase in the consumption of English coal among the French and the Germans as very remarkable. Price and transit facilities have, of course, a good deal to do with it, but the great cause appears to be the disinclination of continentalers to seriously apply themselves to the utilisation of their native coal resources so long as they can obtain decent supplies of English coal.

We see another example of this in Russia. The CZAR's great empire contains so much coal that a party of Philadelphians recently crossed the Atlantic and had an interview with his Imperial Majesty himself with reference to the working of coal in some of the southern Russian provinces. The Philadelphians arrived at the conclusion that dollars were to be made by the extraction of the coal in question, and something will probably result from their recent voyage. Russia has also an extensive railway system, and good railway communication must have a powerful tendency to encourage energetic coal mining. But still nothing seems to render Russia independent of English coal supplies. In September this year we exported 193,410 tons of our coal to Russia, whilst our corresponding shipments in the same direction in September, 1879, amounted to 160,860 tons, and in September, 1878, to 128,444 tons. In the nine months ending September 30 this year the aggregate exports were 1,317,979 tons, as compared with 1,058,165 tons in the corresponding period of 1879, and 1,101,917 tons in the corresponding period of 1878. Thus in all directions our neighbours are using up more and more of our coal. Whether this is, after all, a real advantage is another matter.

GOLD IN SURINAM.—The Government Gazette of Surinam, dated Sept. 7, notified the export of gold from that colony as follows:—

1876	.....Gulden	49,900
1877	.....	293,880
1878	.....	407,059
1879	.....	679,914
First half, 1880	.....	390,697
July	.....	75,922
August	.....	85,343
September	.....	34,074

The total value of the export of gold from 1876 to Sept., 1880, is 2,066,789 guilders, or 172,232. 8s. 4d. sterling.

THE MINES REGULATION ACT.—At Nuneaton on Thursday, T. B. Kydd and Andrew Boosie, agent and manager at Griff Colliery, belonging to Mr. Newdegate, M.P., were charged with breaches of the Mines Regulation Act by neglecting to provide sufficient ventilation to dilute and render harmless the noxious gases in the workings. Recently, while a man was working in the pit with a naked light, an explosion occurred, and as a consequence these proceedings were instituted by the Secretary of State. The defendants, who appeared to have improved the ventilation subsequent to the explosion, were each fined 2l.

THE EMPLOYERS' LIABILITY BILL.—The coal trade will probably be as much affected as any other branch of industry by the operation of the Employers' Liability Act, and a very numerous attendance meeting of the South Lancashire and Cheshire Coalowners' Association, called specially for the consideration of the question, was held in Manchester, on Wednesday, when a committee was appointed to consider and report to a future meeting the best course to be adopted in view of the altered conditions which have been introduced in the relations between the coalowners and their employees.

MINING INSTITUTE OF CORNWALL.—It is beyond question that the value of commendation depends upon the position and attainments of those by whom it is given, since what would be regarded as excellent by an incompetent judge might be regarded by those intimately acquainted with what had already been done in the same direction, or what could be done by other means, as altogether unworthy of consideration. There is an old story of an engineer still living who truly pronounced a really worthless lode "the finest lode he had ever seen in his life," and the capitalists for whom the report was made readily expended money upon it, because they were unacquainted with the additional, though perhaps not unimportant fact that the engineer had never before seen a tin lode of any kind. Now, the Mining Institute of Cornwall being composed exclusively of men practically acquainted with Cornish mining engineering—the president, for example, is Capt. Josiah Thomas, of Dolcoath, and the vice-presidents Capt. William Teague and R. H. Williams—there will be no doubt that they must well know what has been, and what can be, done in practical mining in their district, and as it is announced that the Institute's next exhibition of mining machinery, models of machinery suitable for mining purposes, tools, &c., will be held at Truro towards the end of next month it will obviously be to the advantage of inventors and manufacturers to compete for the medals and certificates of merit which will be awarded to successful exhibitors, since from the undoubted competence of the judges to give an opinion upon the particular subject undertaken by them a better recommendation to intending purchasers than the obtaining of a Mining Institute prize could be offered. The mode by which intending exhibitors can secure admission is advertised in another

column, and it is cordially to be hoped that the exhibition will prove a great success.

Mr. RALPH THOMAS BODLEY, of the Bristol Mining School and the Royal School of Mines, has been elected to the Millar Natural Science Scholarship at Trinity College Oxford. The scholarship is tenable for four years during residence, and is of the annual value of 80l.

Mr. WYLD, of Charing Cross, Geographer to the Queen, will shortly publish an elaborate map of the Gold Fields and Gold Reefs of Southern India.

BESSEMER STEEL.—The favour with which Bessemer steel is regarded may be judged from the fact that 2,864,605 tons were produced last year. Of this, America leads with 928,972 tons, and Great Britain 834,511 tons, the balance being distributed over Germany, France, Belgium, Austria, Sweden, and Russia.

MINING IN SOUTH AUSTRALIA.

Adelaide, Sept. 12.—Mining is still labouring under the effects of low prices, but, nevertheless, a good deal is being done on Yorke's Peninsula at the great mines Moonta, Hamley, and Wallaroo. The Karilla also continues to hold its own, and the proprietors of the old "New Cornwall Mine" are making vigorous efforts to re-open that once valuable property. The ore had run out in places, but recent investigations show a very promising state of things for future operations. Several fine lodes and cross-courses have been traced in yet virgin country, and from the nature and quantity of the ore raised before the mine was "knacked" it is thought that it may yet prove itself one of the great mines of South Australia.

A new and rich discovery of copper is reported in a locality 70 miles north-east of the Burra, but which will shortly be within 30 miles of the railway. Splendid samples of ore, from 30 to 40 per cent. of copper, have been brought to Adelaide, but in the present state of things they cause little excitement. The recent discovery on the old Kapunda Mine property is a most important one, as it is in the centre of a large area of ground hitherto unworked. The ore is of the character originally found in this mine—good green and blue carbonates. If the price of copper should rise to 80l. mining will become lively at Kapunda, and business generally will receive a great impetus.

It is a matter for great regret that in a country like this, known to be rich in all the metallic ores, and in many precious stones also, we have no Government geologist or mineralogist, and the public generally are surprisingly apathetic regarding the wealth that lies beneath their feet. There is abundant opportunity for the safe investment of English or foreign capital in our gold reefs and silver-lead mines, as well as in copper mining. Gold is now known to be very extensively diffused throughout the colony in quartz reefs, from which ½ oz. to over 1 oz. of gold to the ton of stuff can be extracted. Half an ounce ought to pay well, but there are many reefs which have never been fairly opened which will yield much more. Our silver-lead mines too have yielded 60 to 80 per cent. of lead with 40 to 70 oz. of silver to the ton. I hope the mention of these facts will attract the attention they deserve from mining adventurers in England. A company has just been formed to test our petroleum country near the Coorong, and there is every prospect of its success.

EXPLORING FOR COAL IN NATAL.

Sometime ago we mentioned that Mr. Frederick W. North, mining engineer of the Rowley Hall Colliery, near Dudley, and of various other enterprises in that locality, and son of Mr. William North, the ex-Mayor of Dudley, had left England for Natal to inspect and, in fact, explore the coal fields of that colony for the Colonial Government. This was an arrangement made by his Excellency Sir Henry Bulwer while Mr. North was making his inspection of the coal fields of Cape Colony upon a former visit to South Africa, and had it not been for the outbreak of the Zulu war, with all its horrors, the exploration would ere this have been completed. Upon arrival in the colony Mr. North's previous experience in South African coal inspection was of service, and soon after landing at Durban, the only seaport of Natal, he left for the chief town, Pietermaritzburg, and the official headquarters of the Government. It was the work of only a few days to fit out with provender and other necessities the bullock wagon, drawn by sixteen oxen, which during his six months' tour of inspection would have to do duty as both coach and hotel. In addition to this cumbersome vehicle the needful mining and boring tools, with tents for sheltering both white and black labourers from sun and storm in a semi-tropical climate had to be loaded upon another wagon. All this needful equipment for a comparatively short journey and residence in an open country, without hotels, &c., being ready a start in quest of coal was made. The services of Mr. W. Molyneux, F.G.S., of Burton-on-Trent, who had accompanied the engineer from England in the hope that he may have been attached to the expedition were not accepted by the Government, and, therefore, his special geological knowledge could not be made available. The season was a dry one, and the journey towards Helpmakaar, Dundee, and Rorke's Drift, through the usual undulating country of South Africa, with bare hills and plains, and occasional valleys or warm hill sides, covered with low bush and mimosa thorn, was performed without incident, except perhaps the death of a tired ox, whose funeral was soon attended by hundreds of vultures; the summary dismissal of an insubordinate, or the sticking fast of the caravan amongst the boulders of some river beds.

Helpmakaar, a village of three or four houses, and a little Dutch church for occasional service, attended by the few Boers located upon isolated farms within a radius of 25 miles, was a commissariat centre during the war, as was also Dundee, and, of course, these places were the haunts of vagabonds who always hover about the rear of an army in the field. As a single specimen of their work it may be mentioned that even the little organ out of the Dutch church at the former place was stolen, and no trace of it has ever been found. Before reaching Helpmakaar little seams of coal were detected in the nearly horizontal strata, believed to correlate with the Permian and New Red Sandstone of Great Britain. These small seams occur across the country right up to the Buffalo river, at Rorke's Drift, the boundary of the colony, and the scene of the memorable defence of Chard and Bromhead, in the now ruined mission house. Even beyond the Buffalo and in the hills overlooking the fatal field of Isandhlwand the same strata, with little coals, was detected, and further northward, both in Zululand and in the colony of Natal, these deposits have been found to improve, and become workable seams of bituminous, semi-bituminous, or fat coking coals. The stay of a short winter's day in July upon the field of Isandhlwand, where the terrible disaster befel the 24th Regiment, was long enough to have many melancholy experiences; perhaps the worst of all being to notice the bones of brave men from Warwickshire bleaching in the sun, and more sad to observe half-buried and some actually unburied bodies of English soldiers, who, having fought nobly and well, at least deserved at the hands of their countrymen and comrades "a soldier's grave." One poor fellow of the 1st 24th Regiment, J. Johnson, whose tunic showed the fatal assegai-wound in the chest, was found by Mr. North, and buried where he fell. The Empress Eugenie returning from her melancholy mission had only recently left the scene, and they had also found unburied bodies, and given them a resting place. The Zulus of the neighbourhood said—"There are plenty of them along the line of retreat; there is no no war now; why don't the English bury their dead; ours are all buried."

The best workable coal of Natal, so far as it is at present known, has been found to commence between Helpmakaar and Dundee, and very important coals, from 6 ft. to 12 ft. thick, extending over many miles of almost uninhabited country up to Newcastle, are now proved to exist. Mr. North estimates that within the colony of Natal he has already inspected 200,000,000 tons, suitable for either house steam, locomotive, marine, or gas purposes. But, although coal at the present time is sold at Pietermaritzburg for 4l. per ton, and at Durban at 3l. per ton, and these coals could be put on the banks or into wagons at 10s. per ton, Mr. North thinks the deposits he has surveyed will be of no service until they are placed under railway

communication. The railway will be open to Maritzburg in a month or two; but the distance between Dundee and that town is still 130 miles, and from the capital to Newcastle 180 miles—therefore, about 150 miles of railway must be constructed before the colony can avail itself of what Mr. North considers to be "the only deposit, together with iron ore, with which Nature has endowed Natal."

EUREKA (NEVADA) DISTRICT.

Very pertinent to this and other mining districts where all prospecting is done by comparatively poor individual, or small parties of miners are the following remarks, culled from the New York Mining News of Sept. 10:—

"Why is it (asks a correspondent) that parties who pretend to have really valuable mines are so anxious to sell them at mere nominal figures?" This question is easily answered without going beyond the realm of any man's understanding. The prospector is always a poor man. As soon as he has discovered a valuable claim and uncovered it a few feet, the expensive part of the work begins. Few shafts will turn out ore enough to pay the expense of sinking and timbering, and no miner who knows his business will undertake to drift or slope before he has reached a depth of from 50 ft. to 100 ft. Being destitute of money, and knowing that unless the ore is of more than ordinary richness, and the vein very wide, he will not be able to sink the shaft without assistance, the discoverer offers his prospect, or a large interest in it, for sale to the first man who will take it at a reasonable price. Unless the purchaser is familiar with mining he never thinks of the fact that the shaft must be timbered from top to bottom at a heavy expense. At the depth of 100 ft. or less hoisting works of some description must be erected, and something more than man-power used in hoisting out the earth or rock. All these improvements cost money, and until the mine is well opened, which will not be before a depth of 300 ft. has been attained, no large profits need be looked for. Every prospector knows these facts, and for this reason, if destitute of means, he proceeds to sell his claim. By this means capital comes into possession of all the best mines in the country. Simply because it has the power which the prospector has not, and without which few mines can be put upon a paying basis.

In the Eureka district, until lately without railway communication the state of things depicted above was particularly applicable. Now, however, a railway is open from Palisade to Eureka, giving direct communication with San Francisco on the west and Salt Lake and other cities to the east, much attention is being directed by enterprising mining adventurers in America to the resources of Eureka, and the attention of English and continental capitalists should also be called to the permanence of the ore resources, as shown by the work in all the mines there which have been practically worked by business men for an essentially business object—the making of money steadily and surely.

Among recent developments in this direction attention is called to the Titus Mine, for which the largest wharf ever constructed in this district has just been completed. This mine is worked by private residents at Eureka, many of whom are said to be employees of the Richmond Company. This whim is estimated to be sufficient to work to a depth of 400 ft., and the work of sinking on this mine will be vigorously proceeded with. The president of a Chicago bank has just acquired the mining deeds of six locations in Antelope District, Eureka County, the consideration for each deed being \$50,000. The new shaft of the Eureka Consolidated Company was down 425 ft., and the two furnaces continue running smoothly with an ample supply of ore. The Albion Company were just about to sink their shaft an additional 100 feet, to get under the large body of ore recently discovered, and about which there had been a legal fight between that company and the Richmond Company. The Silver Connor hoisting works, not far from the Dunderberg and the Eagle Mines, were being repaired, and the Eureka Sentinel, of Sept. 21, remarks that "there was a lively application for patents on the mineral lands in Eureka and Prospect Mountain districts." One of the Ruby Company's furnaces (says the same paper) was being set in order under the superintendence of Mr. Dowlan, the company's smelter, preparatory to starting up, and from all accounts this company will have large ore supplies in November, when the drift from the 600 ft. station is completed to run under the ore body already reported. The Eagle Mines, sold to the Eureka (Nevada) Silver Mining Company, are in just such a position described in the New York Mining World. The prospectors are not rich men, and require capital to develop the mine, which they have, however, sunk to a depth of 300 ft. Abundant evidence is given of the ore producing capabilities of the mine, and even more can be said of the Williamsburg, from which ore was being taken and work going on at last dates.

The Eureka district is one which deserves greater attention than it has received. That such has only been delayed by the unfortunate preliminary experience of both the Richmond and Ruby Companies is the firm conviction of the most stable Eureka residents and merchants. These see the unfortunate results of the action of those who assumed to themselves the property of others, and buyers of mines need only take the usual business-like precautions to investigate the titles of their purchases to be certain of an undisturbed possession. The Courts at Eureka and the merchants will see justice done to those coming among them.

ACCIDENTS IN MINES.—At the Mining Institute of Scotland monthly meeting on Oct. 14—Mr. Ralph Moore, President, in the chair—Mr. J. T. Robson, Assistant-Inspector of Mines, read an able paper on "Falls of Roof and Sides," in which he considered how it was possible to reduce the number of fatalities from this cause, and gave a short description of the various conditions under which falls occur, the means taken for the prevention of accidents arising therefrom, and offered several suggestions for improvement. Without giving an opinion on the subject, the President remarked that he scarcely ever knew of a man being injured in the act of getting away from a piece of coal he was trying to bring down, nor while he was trying to bring down a stone from the roof. The most accidents happened when they were not expected, when people were not guarding against the dangers. It was remarkable to notice the excuses made to his colleague and he when accidents occurred and they examined into them. It was frequently said to both of them—"We told the man this was wrong, the fireman told the man so-and-so, and the man said when he got his hutch filled he would put up a prop;" but in nearly all cases it was the unexpected that happened. In regard to those lamentable cases of accident, not of fatalities, they had in his last report taken the trouble to collect the number of days men were idle, and some were 60 days and some were over 100 off work in consequence of falls. He held there was no doubt whatever but a fall of roof could be guarded against, and he thought they had great room for improvement in the matter of propping. Col. Austine regarded it as an astonishing statement the President had made, and there could not be a doubt as to the truth of it—that accidents from falls of the roof generally occurred from want of the proper precaution being taken before the accident happened. He strongly urged that the man who looked after the proper treeing should not simply say this should be done, but should never leave the place till it was done. He reminded them that in addition to their present responsibilities on account of accidents, after the new year there would be a great deal more. In the course of the further discussion of the paper, the President stated that at Blantyre Collieries they had introduced into the special rules that props should be put up at certain distances, since which there had been no accident from falls, while there were several before. The discussion was adjourned, the President expressing the desire that it should be of an exhaustive character.

IMPROVEMENT IN COLLIERY TUBS.—An ingenious arrangement for a constant automatic lubrication, and also for giving more freedom of action to the wheels of colliery tubs, &c., has just been devised and patented by Mr. JAMES REILLY, of the Globe Mahogany Chair Works, Pomona Gardens, Manchester. Colliery tubs as now generally constructed simply rest upon open bearings, which have to be constantly re-oiled, and being exposed to the dirt and dust quickly become clogged, which necessarily not only interferes with the free action of the wheels but greatly adds to the wear and tear upon the bearings. Mr. Reilly's invention does away with all these disadvantages, and may be briefly described as follows:—In the first place the wheels run loose upon the shaft or axle-tree, instead of being fixed as at present, and the boss of the wheel is so constructed as to form an oil-box containing a sufficient quantity of oil, which is supplied from the outside, to constantly lubricate the wheels for months without replacing. The outside of the boss, which has a solid end, is recessed beyond the end of the bearing to the extent of ¼ of an inch to contain oil, whilst the inner portion of the boss is

bored through on the outer rim, and these holes, which also contain oil, communicate with a groove in the centre of the boss, which passes the oil on to the bearings. These apertures to the oil-box from the inside portion of the boss are tightly closed up by means of turned collars bolted over the holes, and as the outer portion of the boss, as already stated, is solid it will be seen that the oil-box is perfectly closed up from dirt and dust; in fact, nothing can get near it, and it is left free to act constantly upon the bearings through the flange in the centre of the boss. A further advantage is secured by the wheels being fitted loose on to the axle-tree, and allowed free action inside the boss. The tub, by the independent play of each wheel thus secured, can be turned readily in any direction, and round the sharpest curve, without the assistance of a turntable; indeed, such is the freedom of motion that a pair of wheels on a level surface will describe with difficulty a complete circle, or even a figure 8. Mr. Reilly also intends attaching to his patent wheels a counting indicator, which will record every time the tub has been tipped, and thus afford an effective check against the weighman on the pit bank.

REVIVAL OF MINING IN THE TAVISTOCK DISTRICT.

[FROM A CORRESPONDENT.]

The starting of the engine the week before last at the Devon Great United Mine will mark an important epoch in the history of the revival of mining enterprise in the Tavistock district. After having been suspended for a considerable time, operations have been resumed on this valuable property under the most promising auspices. There was never any question that the lodes in the sett are numerous and highly metalliferous. The suspension of the mine took place for two reasons—chiefly because of a dispute between the lords and the adventurers, and partly in consequence of a time of depression setting in. During the eight or ten years that the property was worked as the West Maria and Wheal Fortescue over 45,000l. worth of copper, arsenic, tin, and lead was raised. In order to develop the ground to the west of Devon Great Consols a shaft was sunk to the 50 fm. level, and a cross-cut was driven at the 40 and another at the 50 fm. level. At the 40 the cross-cut intersected the north lode, and rich ore was discovered, which was valued at 40l. to 60l. per fathom. The lode was found to incline eastward, and it was deemed desirable to sink a shaft between the 30 and 40, and almost immediately a course of ore was discovered. Then came the dispute which culminated in law proceedings, and operations were suspended. The mine has now been re-started under the name of Devon Great United, taking in Wheal William, which is in Cornwall, immediately adjoining Wheal Maria and Wheal Fortescue, and separated from them only by the small River Tamar.

The mine is most favourably situated as regards the geological characteristics of its surroundings. As Mr. PETER WATSON and Mr. MOSES BAWDEN—who probably know more about the geological and mineralogical features of the district than any men living—rightly pointed out to the shareholders a fortnight since on the mine, in looking for mineral veins search must be made within a certain distance of certain stratifications, and they illustrated the truth of their observations by pointing out that the mines of Cornwall and Devon are found within a certain range of the ore-bearing granite hills which run through these two counties. Regarded from this practical standpoint, the position of the Devon Great United Mines is all that can be desired. In Cornwall copper and tin have been found richest where the strata of granite and clay-slate unite, and the Devon Great United is located on the east and west of the River Tamar, where the granite of Kitt Hill, Cornwall, slopes down to one side of the river, and the clay-slate rises boldly up on the other side. On the Cornish side, clustering round Kitt Hill, or in the immediate vicinity, are Drake Walls, Hingston Down, Gunnislake, and other well-known mines. On the Devon side, and in this hill of clay-slate, has been found that immense body of copper ore which has been a source of such enormous profits in Devon Great Consols.

One of the earliest discoveries of copper on the Devon side of the river was in Old Wheal Friendship, which was of great importance and highly profitable, the dividends declared amounting to over 300,000l. Since the time that Wheal Friendship was brought into a state of prosperity a large number of mines have sprung up in the locality, some of which have been highly profitable, and nearly the whole more or less productive. But in 1844 the discovery referred to above was made, which threw all the other mines in the district into the shade. In that year copper was struck in the ground which has since become so famous under the name of Devon Great Consols. By accident the mine was opened on a rich portion of the lode, and ore was found at less than 20 fms. from surface. A company was formed in 1824 shares of 1l. each, and within seven years they sold 80,000 tons of copper, which gave the Duke of Bedford nearly 40,000l. in dues, and to the shareholders about 180,000l. in dividends, in addition to providing a sum of 120,000l., which was expended in the development of the mine. These were the palmy days of Devon Great Consols. At one time the 1l. shares touched 800l. each. The excitement which existed in the district is still fresh in the memory of the older residents. In Tavistock the amount of speculation and even gambling in the shares was something enormous. The Bedford Hotel was the chief place of assembly for the buyers and sellers of the shares, and if the walls of the large room of that well-known hostelry could speak, they could tell strange doings of some of the fortunate speculators. There are men living who can vouch for the fact that one lucky individual lighted his pipe with a 5l. note, and another ate a note of like value placed sandwich fashion between bread and butter. Other wild freaks were indulged in by those who had made rapid fortunes out of their transactions in the shares of Devon Great Consols. In the next 15 years—from the beginning of March, 1851, to March, 1865—there were produced and sold 343,182 tons of ore, the Duke of Bedford receiving as dues the sum of 194,300l., and the shareholders 797,184l. as dividends. In addition to the receipt of dues the Duke of Bedford was paid 22,052l. for the renewal of the lease and for land destroyed, making altogether a sum of 216,383l. Up to March last copper ore to the amount altogether of over 3,500,000l. had been sold, over 300,000l. had been paid in royalties, &c., to the Duke of Bedford, and 1,200,000l. paid in dividends to the shareholders in addition to the enormous amount expended out of revenue on plant, machinery, &c.

As is well known, some time ago the shareholders of Devon Great Consols fell upon evil times, and notwithstanding the known richness of the mine dividends ceased, and at one time it really seemed that this magnificent property would be brought to a standstill. Whether this reverse of fortune was caused by the depression in the metal trade, or whether the system of management pursued in any way conducted to it, it is not necessary now to enquire. What is of more importance to know is that just at the nick of time, when things were looking about as black as they possibly could, Mr. Peter Watson was induced to undertake the administration of affairs, and under his energetic and judicious supervision, ably and loyally backed by the heads of departments at the mine, confidence has been restored to the shareholders, harmony and goodwill amongst the workpeople, and splendid quarterly dividends have been resumed, with every prospect of their increasing in future.

Some of the facts narrated above will, no doubt, read like an old-told tale to many persons who have been acquainted with the past doings of Devon Great Consols; but it must be remembered that there may be many shareholders in Devon Great United who are not so well up in the subject, and the details given above may be interesting to them, and enable them to form a better judgment of the value of their own property. Because, of course, the prospective value and success of Devon Great United lie in the fact that the lodes which have proved so enormously rich in Devon Great Consols run direct into Devon Great United. The enterprise is, therefore, placed beyond the pale of mere speculation. The works have been recommenced, not to try and find ore in a district believed to be rich, but hitherto unproved, but sinking will be immediately proceeded with on lodes which have proved immensely valuable within almost a stone-throw's distance. Therefore, the work will not be subject to those vicissitudes which attend operations on new and undeveloped districts.

Not the least important point in connection with the re-starting of the mine as Devon Great United is to be found in the fact that the operations will be carried on under the management of men who have

devoted all their lives to the occupation of mining, and who from their great experience and high moral character have gained the confidence of all who have been associated with them in other undertakings. In Mr. Peter Watson the shareholders possess a Chairman who by his success in other undertakings—some of them taken up at times when they were in sorry straits—has proved his right to claim the confidence not only of the shareholders, but also those employed in the mine. Mr. Peter Watson is supported by a board composed of gentlemen of influence and business experience. At the mine there is Mr. Moses Bawden as purser, and Capt. Isaac Richards as manager with Capt. Clemo; and it is almost needless to remark that no three men could be found possessing a greater knowledge of mining matters in the district, and certainly none who command in a greater degree the respect and confidence of all around them. Most if not all the old heads of departments remain, and the work-people, since Mr. Peter Watson has had the management, seem to be working contentedly. Therefore, the Devon Great United starts under all those conditions which are essential to success. That it will prove a success, and that in the near future, no one who knows the property for a moment doubts. If through any of those unforeseen circumstances which frequently mar the success of all human undertakings the result should turn out otherwise than is anticipated, at any rate the shareholders will have the satisfaction of knowing that all that experience and care can suggest has been done to attain the results they desire.

Perhaps one word of caution may not be out of place. Mr. Peter Watson, whilst openly stating his belief regarding the excellent future of Devon Great United, has always warned shareholders in mines that they must not be too sanguine as to results, and must make allowance for the altered circumstances of the times. In a word, they must scarcely expect a Devon Great Consols, at any rate as regards the enormous dividends paid by that company. It must be borne in mind that the conditions of the metal market are greatly changed during the past 15 or 20 years. Great Britain no longer monopolises, to the extent she formerly did, the metal markets of the world. Considerable quantities of copper are being imported from abroad from mines which have been opened up in different parts of the world—notably from Mexico, Chili, Cape of Good Hope, Spain, and Australia. There are those who think that when a period of brisk trade arrives the quantity of foreign copper will not be sufficient to exercise any appreciable effect upon the price of that metal. They ground their belief chiefly on two facts—first, that up to the present time the foreign copper deposits have been chiefly worked at surface, and that as depth is attained the extra cost will render it less easy to compete with English copper; and, secondly, that the number of purposes for which metals are employed has increased to a wonderful extent during the past few years. On the other hand, it must be remembered that rich metalliferous deposits are known to exist in regions which are at present wholly or partly inaccessible for the purposes of mining. The whole history of the past shows that where a great demand exists for an article there is always to be found capital and enterprise to meet the demand. However, there is no doubt that the problem as to the future of the metal markets of the world is one of the most difficult to solve which it is possible to conceive. One thing is beyond doubt, and that is that the price of metals is now, and has been for a considerable time past, abnormally low, and seeing the vastly increased number of purposes for which metals are now employed, it would not be unfair to assume that the tendency of prices will be upward rather than downward. That the high prices which ruled some years ago will ever return may be doubted. At any rate, Englishmen are not prone to be behindhand in the opening up and development of industrial undertakings; and though the days of enormous mining profits may be passed, there is no reason why fair, and even very large returns, should not be made on the judicious outlay of capital in home mining enterprise.

PROFESSOR RANKINE.—So many are indebted to the laborious and valuable researches of the late Prof. W. J. Macquorn Rankine for knowledge which has materially assisted them to attain the professional reputation they now occupy, and so many have had the advantage of the application in engineering works which have been carried out for them of the knowledge diffused by him, that the announcement of the publication of a memorial volume embracing a selection from the "Miscellaneous Scientific Papers, from the Transactions and Proceedings of the Royal and other Scientific and Philosophical Societies and the Scientific and Engineering Journals" contributed by W. J. Macquorn Rankine, C.E., LL.D., F.R.S., late Regius Professor of Civil Engineering and Mechanics in the University of Glasgow, will give general satisfaction. The work, which will be published by Messrs. Charles Griffin and Co., of Stationers' Hall-court, is now nearly ready to be issued, and is intended to be in every way worthy of the object; it will contain many papers of great weight and value, at present to be found only in the records of the various scientific and philosophical societies, and in the scientific and engineering journals, to which they were originally contributed, and, therefore, inaccessible to the majority of scientific workers. It is believed that the bringing together in one volume of these successive important contributions to science will be acceptable to thinkers and students generally, and that the collection—exhibiting as it does not only the extreme originality and depth of the author as a mathematical and scientific investigator, but also the many-sidedness of his genius—will form (as was intended by the circle of friends by whom the plan of the volume was at first conceived) a fitting memorial of one of the most distinguished men our century has produced. The editing of the volume has been undertaken by Mr. W. J. Millar, C.E., a former student and friend of the Professor, and now secretary to the Institution of Engineers and Shipbuilders in Scotland, and the introductory biographical sketch has been written by the Professor of Natural Philosophy in the University of Edinburgh (Mr. P. G. Tait, M.A.), so that there can be no doubt as to the manner in which the task has been performed. As the work will be of much intrinsic value from the information contained, as well as the supplying a lasting memorial of him to whose genius it is dedicated, it cannot fail to be widely appreciated by engineers, and to secure a wide circulation.

PRACTICAL BLOWPIPE ASSAYING.—A very valuable little volume, by a practical man for practical men, has just been completed by Mr. GEORGE ATTWOOD, F.G.S., A.I.C.E., and will doubtless be appreciated by those for whom it is intended. A detailed notice of the book, which is published by Messrs. Sampson Low and Co., of Fleet-street, must be deferred until next week; but in the meantime it may be stated that Mr. Attwood gives abundant evidence that his 18 years' experience in mining and prospecting in foreign countries has taught him not only the value of the blowpipe in the field where no other method of assaying is available, but how to turn it to the best account in every case. A short introduction is followed by a description of the mouth-blowpipe, apparatus, and reagents, &c.; in the second part the most approved method of detecting each particular element is given, a peculiar though novel and practically useful classification being adopted, which prevents a large amount of useless foraging inevitable when the usual arrangement is followed. Commencing with the metals of the alkalis, he works his way up to mercury and platinum and then deals with the non-metals; but the new feature is that only those commonly met with are here included, the rare, perhaps imaginary metals, being placed all together at the end of the chapter; so that whilst didymium, niobium, thallium, and other uncommercial eccentricities are left to themselves, sodium, aluminium, tin, silver, gold, chromium, &c., are brought nearer together. It must be distinctly understood that the work is for blowpipe assayers and not for blowpipe analysts, which accounts for the absence of any table to enable the reader to interpret a blowpipe indication so that he can at once ascertain whether bismuth be present, and he may, if he obtain an unexpected reaction, discover what it indicates by carefully reading the chapter. The third part treats of the assay of silver, gold, mercury, copper, lead, other metals, and coal, and the fourth part embodies some useful tables for facilitating the determination of the commercial value of the mineral assayed, and there is an excellent index. The author acknowledges the assistance he has received from Prof. John Morris in correcting proofs and revising, and this will be a sufficient guarantee for accuracy.

The work as a whole is worthy of high commendation and will be equally useful in the laboratory of the technical school and in the knapsack of the prospector.

SCIENTIFIC ENGLISH READER FOR GERMANS.—Most business men who have studied a foreign language have experienced the difficulty of comprehending the various technical words and expressions met with in correspondence and published works of most importance to them, but Mr. Brockhaus, of Leipzig, has just published the first part of a volume by Dr. Wersoven intended especially "für öder technische Leranstellen," but which will also be useful to those studying without a master. It consists of extracts from the writings of Roscoe, Wilson, Knight, Lockyer, Fleming, Jenkin, and various encyclopaedia articles, with notes for enabling the German student to translate them into the old Strasburg dialect or into modern German phonetics, which, however, being new in Germany are not always used, Dr. Wersoven sometimes retaining the *h*, and spelling correctly, so that Teil on the title page becomes Theil in the body of the work, where there are also Strahlungsvermögen, altherühmte, and innumerable other words correctly spelled. Well may it be regretted that a few conceited pedants should be able to do so much toward rendering all the rich and brilliant literature of Germany comparatively useless to future generations by attempting to change an orthography already almost phonetic, and that even such men as Dr. Wersoven should be compelled to follow so bad an example. Henceforth one must write "Runkorf's coil" and the like, and as it is improbable that the illiterate will trouble themselves to distinguish the aspirate from the silent *h*, it may be expected that so useless a letter will soon be banished altogether. The extracts are selected with much judgment, and as the book is only useful to and to be used by Germans, the occasional introduction of the new orthography, which will probably only be a nine days' wonder, will not prevent its being patronised in Germany. The Phraseological Technical Vocabulary already published by Dr. Wersoven may be regarded as a key to the present volume.

"ROUND THE FIRE-SIDE" is a most interesting series of papers, forming the winter number of "Society." They are well illustrated, and cannot fail to amuse all who are desirous of reading carefully prepared light literature. We may add that the periodical "Society" is in itself a marvel of cheapness, and very far beyond many of its contemporaries in the nature of its information and the style of its writing.

SOUTH WALES INSTITUTE OF ENGINEERS.

An ordinary general meeting of members was held at the Royal Hotel, Cardiff, on Thursday. The chair was taken by the President (Mr. Jas. McMurtue). The attendance was large. The minutes of the last meeting were read and confirmed. Several candidates for admission were ballotted for and declared elected. Several new members previously elected were formally admitted by the President. The nominations for the annual election of office bearers took place. All the retiring members of the Council were re-nominated, with the addition of Mr. Peel in the place of Mr. H. V. Trump. Mr. Hart Huxham, F.G.S., M. Inst. C.E., was also again nominated as secretary. The question of the desirability or otherwise of applying for a Royal Charter of Incorporation was brought before the meeting and discussed at some length, but eventually adjourned till the next meeting. The following papers read at the last meeting, were discussed. "On Safety Hooks and Safety Cages," by Mr. Stephen Humble, and an appendix on "Safety Hooks and Safety Cages," by Mr. Hart Huxham, F.G.S., M. Inst. C.E. The discussion on Mr. Handel Cossam's admirable paper on some of the geological problems of the Bristol coalfield was adjourned, as was also the discussion on "Diving and Diving Machines: with a description of Fleurs's diving and breathing apparatus and Foster and Fleurs's submarine and safety mining lamp for conducting operations under water or in noxious gases, entirely independent of any communication with the atmosphere;" a paper by the secretary, Mr. Hart Huxham, read at the last meeting; a paper by Mr. Thomas Joseph on "The Clayband Ironstone or Mine of the Northern Outcrop of the South Wales Coalfield;" and another by Mr. W. D. Wright on "Underground Horses," were taken as read, and ordered to be printed with the proceedings of the Institute. At the conclusion of the meeting the members dined together at the Royal Hotel, under the Presidency of Mr. McMurtue.

PRIMING FOR MINE CARTRIDGES.

A cap or priming, by means of which the blasting charge of a mine may be exploded without the employment of a light, and which also prevents the projection of flame to the exterior when the priming is ignited, has been invented by Mr. E. RUGGIERI, of Paris; it is particularly adapted for use in mines subject to fire-damp, but is also applicable otherwise for blasting purposes, and to the caps and cartridges used for firearms. In applying the invention to the explosion of blasting cartridges a tube is employed, by preference copper, one end of which is closed, but formed with a central orifice for the passage of a rod carrying a serrated extremity for the ignition of the fulminate by friction. The fulminate is contained within an internal central tube, which is surrounded by a cardboard tube, the latter being in its turn enclosed by the external tube before referred to, and the rod of the igniter also passes through the centre of the fulminate. Within the external tube, at its base or outer end, and between it and the end of the fulminate tube, is placed sandstone powder, pulverised glass, or any other suitable inert matter contained between two washers of india-rubber, or other suitable material, the whole forming a tight joint, so as to prevent the egress of the flame at the time of igniting the fulminate.

The washer nearest to the igniter bears against a shoulder formed by a contraction of the external tube for the purpose of preventing this washer from compressing the pulverised material contained between the washers, as hereinbefore described, and rendering the same too compact when the rod of the igniter is pulled. The external tube is mounted upon a cardboard cylinder of the requisite length, containing a central quick match. In carrying out the operations of blasting, the cap thus constructed is fixed at the entrance of a hole in the mine charged in the ordinary manner, and the rod of the igniter (which may be operated by means of a cord from a distance) is pulled, whereby the fulminate is ignited under the action of the serrated extremity of the rod. The match is thus lighted and projected to the end of the hole in the mine, thus exploding the charge of powder, whilst by the mode of maintaining a tight joint, hereinbefore described, any escape of the flame from the ignition of the fulminate is entirely prevented.

COAL-CUTTING MACHINERY.

A rotary engine driven by compressed air so arranged as to put in motion a piston rod to drive a pick or chisel is proposed by Mr. CHARLES MORSE, of Boston, U.S., as a coal-cutting machine. In practice he provides an ordinary pneumatic rotary engine in a suitable case, which case is made a part of an air-chamber and a cylinder. A valve is placed on the upper part of the said cylinder, and has two ports communicating with it, both of which alternately take air from below the said valve to the cylinder and alternately exhaust air into two other ports, which communicate with pipes at the side of the cylinder; the said valve has imparted to it a reciprocating motion by a "crazy wheel" on the shaft of the rotary engine, the said wheel operating in a groove which is formed in the top of a knuckle-joint countersunk into the top of the aforesaid valve. On the end of the cylinder there is formed a serrated or grooved bearing, on which is placed a sleeve arranged to be rotated by a pinion. This pinion is hung upon a shaft running longitudinally with the cylinder, and operated by a crank to rotate the pick or cutting tool. The piston-rod is round in transverse section, excepting for a portion of its length at one end which is square, and passes through a collar held to the outer end of the said sleeve by a set-screw. The pick or tool is held to the square part of the piston-rod by a socket-joint and a key, and may be detached by driving a key through a hole which is provided, and bearing against the end of the shank of the pick in the socket. Wheels are provided supporting the machine, which is held to its work by one or more ratchet wheels operated by a dog or pawl. A

crank or wheel is provided on the outer end of the shaft of the rotary engine to start the latter off its centre. The exhaust pipes have side ports, and on them are placed collars, which on being turned allow greater or less exhaust of air.

In the operation of the machine air is taken in through a pipe, and the amount thereof is controlled by a valve in this pipe. The air so entering the chamber passes to the rotary engine by means of a port, and is discharged at another port in the ordinary manner of pneumatic rotary engines. The crazy wheel will give a reciprocating movement to the valve on the cylinder, and this valve when in one position exhausts air at one of the said ports upward into another of the said ports in the valve, from whence it passes out at the discharge pipe which is at the side of the cylinder and connects with said port. Air is now taken in at the port at the opposite end of the cylinder, the ports acting alternately to take in and discharge air, there being an exhaust pipe to each of the two ports in connection therewith. This puts the piston in motion to give a reciprocating movement to the pick or tool. To avoid the concussion in the movement of the piston, and to cushion the latter, also to cushion the strokes of the pick, india-rubber cushions are placed in the ends of the cylinder.

NEW GAS-HEATING FURNACE.

In the laboratory of the chemist the gas furnaces and burners manufactured by Mr. T. Fletcher, of Warrington, are so generally known and appreciated that it is not surprising to find he has now turned his attention to the production of a gas-heating burner adapted to general purposes. It need scarcely be stated that all these gas-heating burners are modifications of Bunsen's, the flame being produced not by the mere combustion of the gas but by mixing an explosive mixture of gas and air; but the important modifications which have been introduced by various manufacturers have removed the objection of an explosion upon the sudden change of the gas supply, and just in the same manner as it was found that better results were obtained with gas-illuminating burners by reducing the pressure—which is really the secret of all the economising and regulating burners—so it has been found that what are practically low-pressure Bunsen burners are at once the most economical and the most efficient for general purposes. Nothing material, however, was done towards popularising the aerated gas burner until Mr. Wallace, of Manchester, introduced his burner, which consisted of an upright tube open at the bottom, with a small gas jet underneath pointing directly upwards, the top of the tube being covered with a perforated copper cap. The rush of the gas from the jet carries with it a large quantity of air, which with a gas jet of suitable size produces an explosive mixture, which is burned above the gauze, a steadily burning solid flame requiring no external air supply being the result.

Almost the only objection was that an inconveniently long tube was necessary when large and powerful flames were required, and this inconvenience was removed by Mr. T. Fletcher, of Warrington, by placing the gas injection jet at one end of an open horizontal tube, the other end of which opened into a box, which could be made of almost any size, with a gauze or perforated top. The flame produced is perfectly solid to the centre, intensely hot, and quite adapted. It is said to possess from three to four times the power of any burner of similar appearance; and although this could not be confirmed without a comparative test, there seems to be no reason to doubt it, especially as Mr. Fletcher has probably ascertained the relative heating power by actual trial. Anything more simple than the new solid flame burner could scarcely be wished for, and in the sample forwarded by Mr. Fletcher, and which can be examined at the Mining Journal office, there is absolutely nothing which can be damaged or ordinary care get damaged or displaced. The body of the burner is the tube, half globe, &c., are cast in one piece, so that there is no joint—hence leakage is impossible—and as the bottoms of the tube and of the globe are level, even the spilling of liquid into the burner causes no inconvenience, as it at once flows out at the other end. The burner unquestionably surpasses any gas-heating burner yet introduced, and as it has been found by actual experiment to give a duty higher than the calculated theoretical maximum for the gas consumed it certainly ought to come largely into use. The only part at all subject to wear is the gauze, or, to be more accurate, the perforated copper dome, and even this could be renewed at the cost of a few pence, and without difficulty, so that Mr. Fletcher may fairly be congratulated upon the great advance in heating by gas which he has made.

MAKING HARD AND SOFT STEEL.—The improved furnace invented by Messrs. S. and D. THOMAS, of Trowell, Notts., is constructed at the sides, front, and back of water boshes, connected together as to allow of a current or currents of cold water to pass through them; at one end of the furnace is a space for fuel, and at the opposite end of the furnace is a chamber heated from the flues of the furnace; this chamber contains pipes through which a blast of hot air is forced, the blast entering the furnace at the sides, end, and the fuel chamber is supplied with a blast of cold air from underneath the fire-bars. The top of the furnace is arched in with fire-bricks and the whole of the walls are of fire-brick enclosed in cast-iron plates bolted together and provided with openings closed by doors or cover plates; the bottom of the furnace is of cast-iron plates set on the underside of which jets of water play. A furnace so constructed they line with powdered flint at the sides and on the bottom to a suitable depth, and upon this they place scrap-iron and pig-iron in suitable proportions to make hard steel or fine grain iron, and pig-iron to make soft steel.

IMPROVED WHITE CEMENT.—In the manufacture of a cheap white cement which sets rapidly and furnishes a dry white surface, Mr. J. C. BLOOMFIELD, of Caldwell, proposes to employ as the base of the cement a limestone which burns milk-white, and having calcined it he adds about 5 per cent. of sulphate of lime, such as plaster of Paris, or of other sulphates that are not of a deliquescent character, or of mixtures of these. He reduces the product to powder; with this he thoroughly mingles about its own weight of ground flint or silica, adding the about half of the silica ground to an impalpable powder, and the other half of the silica ground fine.

WHEEL COATERS.—One of the directors (Mr. Ripley), the secretary, and the company's engineer, have visited the mine, and Mr. Ripley report has been presented, and sent out with a notice of a dividend of 2s. 6d. per share, payable on Nov. 15. The report is superlatively far as the practical portion is concerned, by that of Capt. Morris on which it is based, and which appears in another column. Mr. Ripley considers the whole surface works in first-rate order, and judging from present appearances, the shareholders may have confidence in the future of the enterprise.

BWLCH UNITED.—Owing to a scarcity of water, and the blocking of one of the connecting rods, the work upon the dressing has been impeded; the latter of these difficulties has been remedied, but a smaller parcel of silver-lead than anticipated has been in consequence been sent to market; this, however, some rain to supply the deficiency of water will soon rectify, and another parcel is well on its way, although, under the circumstances, the progress in dressing is not as rapid as might be. A discovery of much importance is reported in the 50, speaking of lead of fine appearance having been blasted out.

WEST LISBURN.—Under the direction of Capt. Nicholas B. and until the arrival of the manager, the preparatory work of sinking the shafts and unwatering the mine, together with the necessary surface work, is being vigorously proceeded with. The new power engine advertised for in last week's Journal will probably be selected and purchased within the next few days, and will be placed in the mine without delay, when the mine will be unwatered throughout, and extensive operations immediately proceeded with.

GREAT HOLWAY.—We are happy to state that this week's discovery has been made at the Great Holway Lead Mine, Holway, and every reason to believe that the vein now dropped upon will be a large one. We congratulate the present company on their success. They have heroically, and we trust they will now be richly rewarded for the energy they have displayed. The discovery must be highly gratifying to the leading pivot and shareholder of the company, Mr. E. J. Bartlett, of London, who from first to last, despite all difficulties, has had for his motto "I will succeed."—From the Flintshire Observer.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF WILLIAM ALEXANDER, Esq.,
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-mentioned Act, will be held on the 25th and 27th days of November next, and CANDIDATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMINATIONS, on or before the 20th day of November, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,

CLUNY MACPHERSON, Secretary,
135, St. Vincent-street, Glasgow.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

THE MINING INSTITUTE OF CORNWALL.

PRESIDENT:

JOSIAH THOMAS, Esq.

VICE-PRESIDENTS:

WILLIAM TEAGUE, Esq. | R. H. WILLIAMS, Esq.

THE NEXT EXHIBITION OF MINING MACHINERY, MODELS of MACHINERY suitable for Mining Purposes, TOOLS, &c., will be held at TRURO the latter part of November, when Medals and Certificates of Merit will be awarded to successful Exhibitors.

For further particulars, apply to the Secretary,
THOMAS B. PROVIS, Assoc. Mem. Inst. C.E.
2, Chapel-street, Camborne.

INDIAN PHOENIX GOLD MINING COMPANY (LIMITED).

Notice is hereby given, that NO APPLICATIONS FOR SHARES in this company will be RECEIVED after MONDAY, the 25th instant.
H. T. MCNEALE, Secretary (pro tem.).
64, Austinfriars, London, E.C.

THE LAST CHANCE SILVER MINING COMPANY OF UTAH (LIMITED).

At an EXTRAORDINARY GENERAL MEETING of the shareholders of this company, HELD at the offices of the company as above, on the 12th instant, the resolutions passed at the meeting held on the 27th ultimo were confirmed unanimously.

To ensure allotment to members of the above company applications for shares in the Last Chance Consolidated Silver Mining Company (Limited) must be made on or before the 1st day of November, 1880, after which date all members who have not then applied will be considered to waive their right to an allotment.

Forms of application can be obtained from the undersigned, and on application at the offices of the Last Chance Consolidated Silver Mining Company (Limited), Moorgate-street Chambers, London, E.C.

JOHN PORTER.

THE SCOTTISH AUSTRALIAN MINING COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders of the Scottish Australian Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on FRIDAY, the 28th October instant, at Twelve o'clock at noon precisely, to receive the directors' report and accounts, declare a dividend, and transact the other usual business.

The Share Transfer-Books will be closed from Thursday, the 21st instant, until Friday, the 29th instant, both days inclusive.

By Order of Directors, C. GRAINGER, Secretary.

50, Old Broad-street, London, 19th October, 1880.

LA PLATA MINING AND SMELTING COMPANY OF LEADVILLE, COLORADO.

FOURTEENTH CONSECUTIVE MONTHLY DIVIDEND.

The Board of Directors have DECLARED a DIVIDEND of \$15,000 out of the net profits for the month of September of \$15,326.49 c., being SEVEN AND A HALF CENTS PER SHARE (par value \$10) on the capital, PAYABLE on MONDAY, 1st November, leaving at credit of reserve fund \$50,965.90 c.

THEODORE BERDELL, Vice-President.

21, Great Winchester-street, E.C., 22nd October, 1880.

THE COLOR GOLD MINING COMPANY (LIMITED).

The Mining Journal says: "The professional evidence of the value of the Color Company's property is of a peculiarly important character, being no less than the incidental reference in the report upon some adjoining land. Reporting for Messrs. Arbutnot and Co., of Madras, and another company on land immediately to the south of that of the Color Company, Mr. John Harris states that the number of quartz reefs that have heavy outcrops showing up, and that may also be traced by extensive surface workings, is six; they can be traced down from the Oregon Mine on the north end of the field right through the Color Company's land. Equally satisfactory evidence is given by the engineer of the Mysore Gold Mining Company, whose southern boundary is the Color Company's northern boundary."

THE EXCLUSIVE RIGHT OF MINING IN THE DISTRICT WAS GRANTED BY THE GOVERNMENT OF MYSORE, and, after a prolonged and careful survey the concessionaires acquired the rights over special blocks of land, INCLUDING ONLY LAND IN WHICH AURIFEROUS REEFS ARE.

Full prospectuses and forms of application can be had at the office of the company, 5, East India-avenue, Leadenhall-street, E.C., where applications for shares may be forwarded.

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COUPONS OF SHARES 322

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(Signed) A. LICIONI, President.

(Signed) VICTOR J. GRILLET, Treasurer.

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W. TREGAY, Mining Engineer, REDRUTH,

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THE SHEFFIELD NICKEL AND SILVER PLATING COMPANY

(Limited).—In the Chancery Division on Wednesday, Mr. Justice Field heard a petition for a stay of proceedings in the winding-up, all the debts having been paid and the company proposing to start afresh. Mr. Justice Field, in making the order, expressed his hope that the company would now do well.

REDRUTH MINING EXCHANGE.—The business in the Redruth Mining Exchange still absorbs a good deal of the attention of mine shareholders resident in West Cornwall and elsewhere. This exchange now numbers 180 members—members paying a subscription of 15s. per annum, and others 30s. per annum. The original subscribers contributed 5000. In 100 shares of 52. each, and, not of exclusion, the rule—an unwritten one—being one of inclusion.

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Situate in the parish of Brentor, in the county of Devon, comprising a set of about 45A. 3R. 0P., with engine-house, sheds, and other necessary offices and out-buildings, together with all PLANT, MACHINERY, ROLLING STOCK, STORES, and DRESSED MANGANESE. There are good road approaches and railway accommodation near. Held from the freeholder for a term of 21 years from the 25th March, 1877.

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situate in the parish of Festiniog, near the Tan-y-Grissiau Station on the Festiniog Railway.

The quarry has been opened to a considerable extent, and a large amount of money has been expended in developing the property, and in making inclines to connect it with the Festiniog Railway. There is a powerful water-wheel, saw and planing tables, drum houses, wagons, and every requisite for effective working. The property consists of 356 acres, together with the necessary sheds, barracks, &c.

Further particulars may be had on application to the Liquidators of the said company, at 9, Victoria Chambers, Westminster.

LLANIDLOES, MONTGOMERYSHIRE.

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CWM RICKET AND MAESNANT LEAD MINE.

Which is situate in the parish of LLANGURIG, and is about seven miles west of LLANIDLOES. The set is very extensive and the strata highly mineralised, and contains 17 lodes, including the well-known Van Lode. Two shafts have been sunk and levels driven on these lodes, out of which some tons of rich lead ore have been obtained.

The Plant consists of WATER-WHEELS, DRAWING MACHINE, CRUSHER, PUMPS, and ORE DRESSING TOOLS, all of which are in good working condition. There are also smithy, offices, dwelling houses, dressing floors, &c.

To view, apply to Capt. GREENFELL, on the Mine; and to treat, apply to Mr. R. B. STOCKWELL, Liquidator, 15, Dickinson-street, Manchester.

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The estate possesses wharfage to the river, and large brick and tile works. For further particulars, apply to Messrs. RAWLANCE AND SQUARRY, Salisbury, and 22, Great George-street, Westminster; and Messrs. CARLYON AND SON, Truro.

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Full particulars and price can be obtained on application to Messrs. SMITH, DAVIES, and Co., Solicitors, 1A, Fredericks-place, Old Jewry, E.C.

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The property is within two miles of the Kildwick and Cononley Station on the Midland Railway.

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Further particulars may be obtained on application to Messrs. SMITH, GOTT-HARDT, and Co., Land Agents, Bradford; or to

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Bradford, 8th October, 1880.

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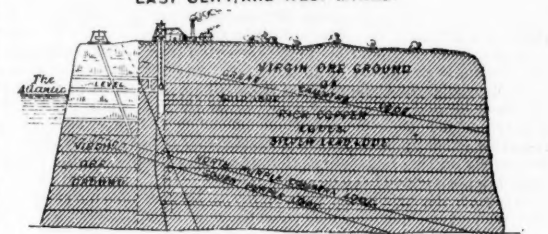
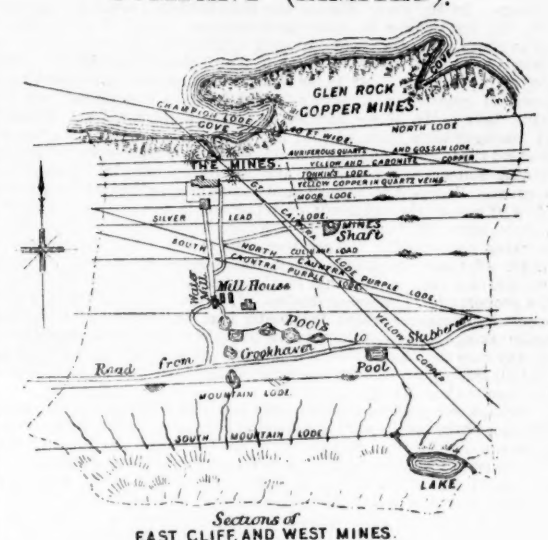
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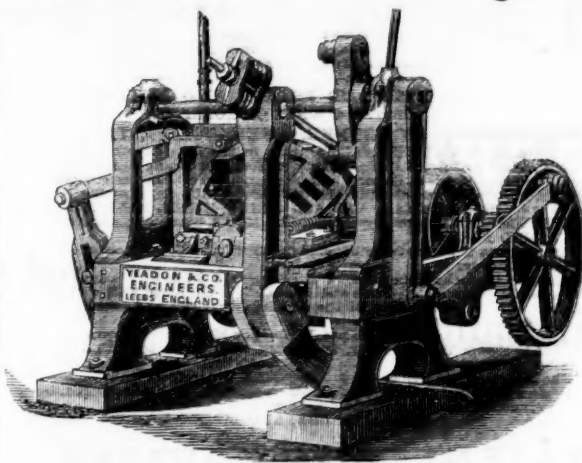
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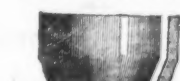
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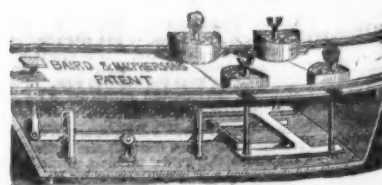


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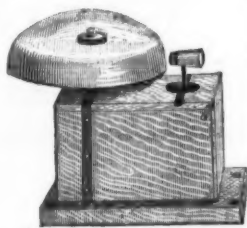
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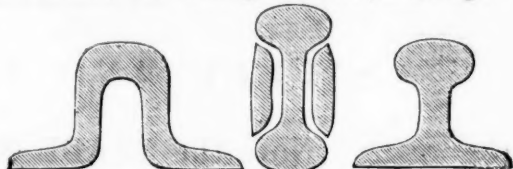
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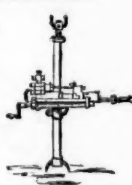
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 home prices. As to care taken in reporting, reference is made to the *Mining Journal*
 Supplement, April 1, 1876, containing a report on property of the Maxwell Land
 Grant and Railway Company; as to technical standing, to the prominent men of
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Engineering and Mining Journal, Feb. 28, 1874.

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
3939 Blue Hills, t, c, St. Agnes	4 6	6	4 1/2	3 1/2	0 0	2 0
10000 Caron, t, Cardigan	2 0	0	0	0	0	0
10000 Carn Brea, t, c, Illogan	56 7	6	84	82 1/2	308 0	1 0
10240 Devon Gr. Consols, c, a, Tavistock	1 0	0	12 1/2	11 1/2	113 1	0 0
4296 Dolcoath, t, c, Camborne	10 14	0	56 1/2	56 1/2	11 0	0 0
30000 East Crovan Moor, t, c, Pateley Bdg.	1 0	0	0	0	0	0
6400 East Pool, t, c, Illogan	0 9	9	38 1/2	37 3/8	20 17	9 0
12500 Frongoch, t, c, Cardigan (18000 sh. iss.)	2 0	0	4 1/2	3 1/2	0 0	0 0
40000 Glas. Car., c, (30000 sh. pd., 10000 pd.)	1 0	0	1 1/2	1 1/2	0 13	0 0
7500 Gorseid and Merilyn Cons., t, Flint	2 10	0	3	2 1/2	0 0	0 0
15000 Great Laxey, t, c, Isle of Man	4 0	0	19 1/2	17 1/2	46 8	0 0
6400 Green Hurl, t, c, Durham	0 6	0	8 1/2	8 1/2	2 14	0 0
20000 Grogwinion, t, Cardigan	2 0	0	3 1/2	3 1/2	0 16	4 0
2800 Isle of Man, t, c, Isle of Man	25 0	0	0	0	83 5	0 0
20000 Leadhills, t, Lancashire	6 0	0	3	2 1/2	0 15	0 0
400 Lieburne, t, Cardigan	18 15	0	0	0	604 10	0 0
10000 Mellanar, t, Hayle	2 0	0	5	4 1/2	1 1	0 0
30000 Miners' Mining Co., t, Wrexham	5 0	0	11 1/2	10 1/2	58 17	2 0
20000 Mining Co. of Ireland, t, c, Wrexham	7 0	0	3 1/2	3 1/2	24 3	0 0
8000 Mousa, t, c, Anglesea	5 0	0	16	15 1/2	0 10	0 0
5328 North Busy, t, c, Blackwater	0 5	8	3 1/2	3 1/2	0 3	4 0
11829 North Hendre, t, c, Wales	2 10	0	5 1/2	5 1/2	3 10	0 0
8063 Ditto	1 0	0	0	0	0 7	0 0
5000 Penhalls, t, St. Agnes	3 17	6	2 1/2	2 1/2	3 15	6 0
6000 Penant, t, bar, North Wales	5 0	0	4	3 1/2	0 10	0 0
12000 Phoenix United, t, c, Link	5 10	3	3 1/2	3 1/2	3 2	6 0
18000 Pr. Patrick, t, c, (also 18000 pd. 10 p.c.)	2 0	0	2	2	18 6	0 0
10000 Red Rock, t, c, Cardigan	2 0	0	1 1/2	1 1/2	0 4	0 0
12000 Roman Gravel, t, Salop	7 10	0	9 1/2	9 1/2	8 1	0 0
4000 Rhydalun, t, c, Wales	10 0	0	0	0	0 5	0 0
512 South Cardigan, t, c, St. Cleer	1 5	0	57 1/2	55 60	749 0	1 0
6123 South Condurrow, t, c, Camborne	5 6	11	11 1/2	11 1/2	7 12	0 0
9000 South Darren, t, c, Cardigan	1 10	0	2 1/2	2 1/2	0 4	0 0
4500 South Wheel Franchise, t, Illogan	7 12	4	12 1/2	13 1/2	40 15	6 0
12000 Tankerville, t, Salop	6 0	0	2 1/2	2 1/2	4 17	6 0
10000 Tincroft, t, c, Pool, Illogan	11 10	0	2 1/2	2 1/2	16 17	0 0
15000 Van, t, Llanidloes	4 5	0	18 1/2	18 1/2	24 13	7 6
3000 West Chiverton, t, c, Penryn	20 5	0	5 1/2	5 1/2	55 10	0 0
512 West Tolgus, c, Redruth	95 10	0	52	50 55	33 0	1 0
1200 West Wheel Seton, c, Camborne	25 10	0	19	17 19	223 0	7 6
6000 West Wasset, c, Illogan	7 0	4	15 1/2	15 1/2	26 17	0 0
12000 Wheel Crebor, c, Tavistock	2 4	0	4 1/2	4 1/2	0 6	3 0
1024 Wheel Eliza Consols, t, St. Austell	18 0	0	0	0	42 10	8 0
4295 Wheel Killy, t, St. Agnes	5 4	6	5	4 1/2	12 17	0 0
3000 Wheel Pevor, t, Redruth	7 11	0	29	28 29	6 3	6 0

FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, t, Spain	2 0	0	1 1/2	1 1/2	2 2	0 1
130000 Almada and Tinto Consol, t, Spain	1 0	0	1 1/2	1 1/2	0 6	3 0
20000 Australian, c, South Australia	7 7	6	1 1/2	1 1/2	1 5	0 0
20000 Cape Copper Mining, t, South Africa	7 0	0	42	41 42	39 7	0 0
35000 Cesena Sulph. Co., Romagnia, Italy	10 0	0	0	0	1 0	0 0
10000 Copiapo, c, Chile (220 shares)	17 0	0	9	8 1/2	7 16	5 0
23500 Eberhardt and Aurora, s, Nevada	10 0	0	2 1/2	2 1/2	1 8	0 0
70000 English & Australian, t, c, S. Aust.	2 10	0	1 1/2	1 1/2	2 18	9 0
20000 Fortuna, t, Spain	2 0	0	5 1/2	5 1/2	7 15	5 0
55000 Frontino & Bolivia, t, New Gran.	2 0	0	4	3 1/2	0 6	0 0
15000 Linares, t, Spain	5 0	0	4 1/2	4 1/2	18 10	0 0
60000 New Quebrada, c, Venezuela	5 0	0	4 1/2	4 1/2	4 1/2	0 0
25000 Pitangui, t, Brazil (in 6000 £1 pd.)	0 10	0	3 1/2	3 1/2	0 1	0 0
10000 Pontgibaud, t, France	30 0	0	20	18 20	27 17	6 0
100000 Port Phillip, t, c, Clunes (25 shares)	1 0	0	5 1/2	5 1/2	1 13	4 0
54000 Richmond Consol, s, Nevada	5 0	0	15 1/2	15 1/2	9 11	6 0
135880 Rio Tinto, t, c, Sp. Comp. Bds. (5 p.c. Scrip)	0 0	0	91 1/2	91 1/2	5	per cent.
225000 Ditto, shares	10 0	0	17	16 1/2	0 18	0 0
40000 Santa Barbara, t, Brazil	0 10	0	2 1/2	2 1/2	0 10	2 0
120000 Scottish-Australian Mining Co., t, c	1 0	0	2 1/2	2 1/2	15	per cent.
80000 Ditto, New	9 10	0	1 1/2	1 1/2	0 2	0 0
50000 Sentinel, t, c, Arrière, France	1 0	0	0	0	0 2	0 0
22500 Sierra Buttes, t, California	2 0	0	1 1/2	1 1/2	2 1	6 0
40625 Ditto, Plumas Eureka	2 0	0	2 1/2	2 1/2	2 10	0 0
253000 St. John del Rey (25 Stock and multiples dealt in)	190	200	12 1/2	12 1/2	1 7	3 0
10000 Tolima, t, c, Colombia	5 0	0	0	0	0 13	1 1/2
25000 Victoria (London), t, Australia	1 0	0	0	0	18 0	2 0
15000 Western Andes, t, Colombia	5 0	0	0	0	18 0	2 0
2100 W. Prussia (5500 pref. sh. £10 pd.)	10 0	0	10 1/2	10 1/2	3 6	8 0

* Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
25500 Aberllyn, t, c, Carnarvon	1 0	0	1 1/2
12000 Assheton, t, c, Carnarvonshire	5 0	0	1 1/2
11583 Bedford Unit, t, c, Tavis (21 hab.)	0 6	0	1 1/2
25000 Belowda, t, c, Roche	1 0	0	1 1/2
600 Bendigall, t, c, Wales	10 0	0	0
30000 Bettwa-y-Coed, t, c, (20000 sh. issued)	1 0	0	0
8000 Blaen Caelan, t, c, Cardigan	3 0	0	0
30000 Bodidris, t, c, Denbighshire	1 0	0	1 1/2
850 Botallack, t, c, St. Just	31 10	0	0
12000 Gwilt, t, c, Wrexham	2 0	0	2 1/2
20000 Breich United, t, c, Cardigan	1 0	0	2 1/2
50000 Cambrian, t, c, Cardigan	2 0	0	2 1/2
6000 Carn Carnarvon, t, c, Carnarvonshire	0 2	0	3 1/2
20000 Carnarvon, t, c, Carnarvonshire	1 0	0	3 1/2
5120 Clementina, t, c, Llanrwst	1 0	0	1 1/2
25000 Coed Mawr Pool, t, c, Carnarvon	2 0	0	0
6000 Combmartin, t, c, North Devon	1 0	0	1 1/2
2450 Cook's Kitchen, t, c, Illogan	29 4	9	12 1/2
15500 Court Grange United, t, c, Llanidloes	1 0	0	1 1/2
8400 Crook Ashburn, t, c, Cumberland	0 5	0	1 1/2
14000 Crosswood Mining Lands, t, c	1 0	0	1 1/2
15000 Cwm Dyffwr, t, c, s, c, Carnarvon	1 0	0	0
20000 Deep Level, t, c, Flintshire	1 0	0	1 1/2
1280 D'Ereshy Consols, t, c, Carnarvon	10 0	0	0
1536 D'Ereshy Mountain, t, c, Llanrwst	20 0	0	50 40 50
20000 Denbighshire Consolidated, t, c	3 0	0	3 2 3
12000 Derwent, t, c, Durham	4 0	0	2 1/2
100000 Devon, t, c, b, Taviat (125000 iss.)	0 1	0	1 1/2
12000 Devon Great United (21)	1 0	0	2 1/2
20000 Devonshire, t, c, Llanidloes	1 0	0	1 1/2
10000 Dobby Syke, t, c, Durham	1 17	0	1 1/2
8000 East Botallack, t, c, St. Just	0 2	0	1 1/2
6144 East Canadon, t, c, St. Cleer	3 7	0	2 1/2
4000 East Chiverton, t, c, Penryn	9 14	9	1 1/2
12000 East Crebor, c, Tavistock	0 7	6	1 1/2
15000 East Devon Cons., t, c, Buckfastleigh	2 0	0	2 1/2
21000 East Van, t, c, Llanidloes	5 0	0	2 1/2
18000 East Van, t, c, Llanidloes	5 0	0	2 1/2
4936 East Wheel Buller, t, c, Gwennap	10 0	0	1 1/2
1114 East Wheel Lovell, t, c, Helston	13 8	6	1 1/2
10000 Edgumbe, t, c, Cornwall	1 0	0	1 1/2
30000 Flintshire Great Consols	1 0	0	0
10000 Fortescue, t, c, St. Stephens	1 0	0	2 1/2
30000 Lady Ashburn, t, c, Tavistock	0 12	6	1 1/2
15000 Lady Bertha, t, c, Tavistock	0 12	6	1 1/2
12000 Ladywell, t, c, Salop (120000 pref. also)	2 10	0	0
5000 Lead Era, t, c, Mold	2 10	0	0
2500 Levant, t, c, St. Just	11 0	0	15 14 15
10000 Lomax, t, c, Helston	1 0	0	1 1/2
5120 Lovell, t, c, Wendron	0 16	0	1 1/2
10000 Llanidloes, t, c, Llanidloes	1 0	0	1 1/2
30000 Llanrwst, t, c, Carnarvon	2 0	0	0
7500 Ditto, 10 per cent. pref.	2 0	0	0
9000 Marke Valley, c, Llanidloes	5 11	0	2 1/2
18000 Marston, t, c, South Wales	1 0	0	1 1/2
6000 Medlyn Moor, t, c, Wendron	3 15	10	0
20000 Mineral Corporation of Gt. Britain	10 0	0	0
20000 Mynydd Gwddol, t, c, Cardigan	1 0	0	1 1/2
20000 Mynydd Gwddol, t, c, Cardigan	3 12	6	4 1/2
25000 Moray Firth (18000 issued)	2 0	0	4 1/2
12000 Moria Du, t, c, Anglesea	1 0	0	1 1/2
6144 Mount Carbis, t, c, Redruth	3 16	0	0
4678 New Broadford, t, c, Cardigan (25 sh.)	3 16	0	0
12000 New Cathedral, t, c, Gwennap	1 0	0	0
2400 New Cook's Kitchen, t, c, Illogan	14 0	8	7 1/2
8000 New Dolcoath, t, c, Camborne	3 0	0	0

NON-DIVIDEND MINES—continued.

Shares.	continued.		
	Paid.	Last wk.	Clos.
6000 New Kitty, t, St. Agnes	0	0	1 1/2
10000 New Llanfair, t, Carnarvon	1	0	1 1/2
12000 New Penrose, t, c, Helston (11 sh.)	0	5	0
3500 New Tincroft, t, c, Lelant	6	0	0
6000 New West Canadon, c, Liskeard	0	2	6
3000 New Wheel Pevor, t, c, Redruth	0	10	0
35000 New Wye Valley, t, c, Montgomery	1	0	2 1/2
10000 N. D'Ereshy Mount, t, c, Carnarv	1	0	1 1/2
12000 North Herodsfoot, t, c, Liskeard	0	5	0
2000 North Levant, t, c, St. Just	13	6	0
50000 North Molton, t, c, Devon	1	0	6 1/2
6000 North Penrith, t, c, Gwennap	1	0	0
2938 North Trekerby, c, St. Agnes	8	17	10
8000 Northern, t, c, Durham	1	0	0
12000 Pandora, t, c, Carnarvon	2	0	0
11612 Pant-y-Mwyn, t, c, Mold	2	0	0
6000 Paragon, t, c, Devon	0	5	0
45000 Parya Corporation, t, c, Anglesea	1	0	0
7500 Pateley Bridge, t, c, Yorkshire	1	0	0
15000 Ditto (also 7500 sh. not issued)	0	19	0
6000 Pedan-drea, t, c, Redruth	1	0	0
6000 Penandres United, c, Camborne	8	0	0
12000 Pen-y-Osced, t, c, Flintshire	1	0	0
12000 Plynlimmon, t, c, Llanidloes	2	0	0
10000 Poole, t, c, Cornwall	0	10	0
10000 Port Nigel, t, c, Carnarvonshire	2	0	0
12000 Prince of Wales, c, Calstock	0	7	6
50000 So. Cambrian, t, c, Cardiganshire	1	0	0
30000 South D'Ereshy Mountain, t, c	1	0	0
35000 So. Devon Unit, t, c, Buckfastleigh	1	0	0
6000 South Penrith, t, c, Gwennap	0	15	0
6000 South Roskear, t, c, Camborne	8	5	0
6000 South Tolearne, t, c, Camborne	3	19	0
40000 South Wheel Crebor, c, Tavistock	1	0	0
2043 South Wheel Croft, c, Illogan	17	2	0
4000 St. Just United, Cornwall	2	10	0
30000 Talybont, t, c, Cardiganshire	1	0	0
40000 Tamar, t, c, Bearslaw	1	0	0
8400 Teedale, t, c, Durham (pref.)	1	0	0
10000 Temple, t, c, Cardigan	1	0	0
5000 Treleigh Wood, t, c, Redruth	6	1	0
12000 Trevecon Consols, t, c, Gwennap	0	5	0
6000 Truro, c, St. Columb	0	4	0
640 Truro, t, c, Nequis, Flintshire	10	0	0
10000 Tyn-y-Fron, t, c, Cardiganshire	1	0	0
11000 Un. Van & Glyn, t, c, (4500 other sh.)	2	0	0
10000 Vaughan, t, c, Cardiganshire	10	0	0
12000 West Assheton, t, c, Carnarvon	1	0	0
6000 West Canadon, c, St. Cleer	0	6	0
3000 W. Craven Moor, t, c, Pateley Bridge	10	0	0
10240 West Devon Consols, c, Calstock	1	0	0
12000 West Holway, t, c, Flintshire	1	0	0
6000 West Kitty, t, c, St. Agnes	0	7	0
20000 W. Lisburne, t, c, (11 sh.) Cardigan	1	0	0
5000 West Mary Ann, t, c, Menheniot	1	2	6
3000 Westminster United, Llanidloes	5	0	0
20000 West Pateley Bridge, t, c, Yorkshire	1	0	0
12000 West Phoenix, t, c, Cardigan	0	0	0
5190 West Police, St. Day	0	0	0
10000 West Vor, t, c, tte-hu, Breage	2	0	0
2048 West Wheel Frances, t, c, Illogan	29	6	0
3000 West Wheel Pevor, t, c, Redruth	12	6	16
1000 West Wheel Towan, c, t, c, Illogan	25	0	0
12000 West Wye Valley, t, c, Montgomery	3	0	0
6000 Wheel Agnes, t, c, Llanidloes	14	0	0
6144 Wheel Bassett, c, Illogan	0	12	6
12000 Wheel Coalts United, t, c, St. Agnes	0	12	6
2585 W. Conford, & Co. Tres., c, Gwennap	2	2	0
15000 Wheel George, t, c, bl, Carnarvon	1	0	0
6000 Wheel Grenville, t, c, Camborne	5	0	0
12288 Wheel Jane, t, Kes	1	5	8
12000 Wheel Jewel, c, St. Hilary	0	11	0
2000 W. Hon. W. & Co., t, c, Lisk	2	0	0
6000 Wheel Owles, t, c, St. Just	8	0	0
6000 Wh. Prussia, & Cardew, t, c, Rdrth	1	0	0
12000 Wheel Russell, c, Tavistock	2	1	6
6000 Wheel Sisters, t, Lelant	2	15	0
4096 Wheel Uny, t, c, Redruth	15	16	0
24000 Yetishw, t, c, Cardigan	1	0	0

bl, blende; c, copper; g, gold; l, lead; s, silver; st, slate; sl, silver-lead; t, tin; z, zinc; & Co., & Co. arsenic.

* Limited Liability Companies; † quoted on the Stock Exchange.

† have paid dividends.